To: Lyons, Troy[lyons.troy@epa.gov]; Ringel, Aaron[ringel.aaron@epa.gov]
Cc: Rodrick, Christian[rodrick.christian@epa.gov]; Bowman, Liz[Bowman.Liz@epa.gov]; Patrick Traylor (traylor.patrick@epa.gov)[traylor.patrick@epa.gov]
From: Bodine, Susan
Sent: Tue 11/28/2017 6:08:22 PM
Subject: RE: Issue Memos/Talkers Needed for 12/7 E&C Hearing
VW CAA guilty plea.pdf
Fiat Chrysler complaint.pdf
Macy's RCRA civil case.pdf
PDC Energy Civil CAA case.pdf
ExxonMobil civil CAA case.pdf
Tyson Poultry criminal CWA case.pdf
68th street dump baltimore county md.pdf
RIN fraud case Gregory Schnabel.pdf
Enforcement talking points.docx

Attached are talking points and press releases for the individual cases discussed in the talkers (for additional background).

From: Lyons, Troy
Sent: Tuesday, November 28, 2017 11:55 AM
To: Ringel, Aaron <ringel.aaron@epa.gov>; Forsgren, Lee <Forsgren.Lee@epa.gov>; Greenwalt, Sarah <greenwalt.sarah@epa.gov>; Bodine, Susan <bodine.susan@epa.gov>; Traylor, Patrick <traylor.patrick@epa.gov>; Brown, Byron <brown.byron@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>
Cc: Rodrick, Christian <rodrick.christian@epa.gov>
Subject: RE: Issue Memos/Talkers Needed for 12/7 E&C Hearing

Thank you all for your efforts in turning these briefing notes around. Our goal is to give the Administrator his first copy of the briefing binder tomorrow.

From: Ringel, Aaron
Sent: Monday, November 27, 2017 3:47 PM
To: Forsgren, Lee <Forsgren.Lee@epa.gov>; Greenwalt, Sarah <greenwalt.sarah@epa.gov>; Bodine, Susan <bodine.susan@epa.gov>; Traylor, Patrick <traylor.patrick@epa.gov>; Brown, Byron <brown.byron@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Rodrick, Christian <rodrick.christian@epa.gov>
Subject: FW: Issue Memos/Talkers Needed for 12/7 E&C Hearing

Lee/Sarah/Susan/Patrick/Byron/Richard, just wanted to circle back around with you all on the memos/talkers needed for the Administrator's briefing binder. Below are the ones that are outstanding, is it possible to get these by tomorrow?

Thanks,

Aaron

- **Enforcement Activities**
  - Patrick Traylor & Susan Bodine/OECA
- **Lead and Copper Rule**
  - Lee Forsgren & Sarah Greenwalt/OW
- **Brownfields**
  - Kell Kelly/AO/OLEM
- **Superfund Task Force**
  - Kell Kelly/AO/OLEM
- **Enforcement Activities**
  - Patrick Traylor & Susan Bodine/OECA
- **CERCLA 108(b) rule**
  - Byron Brown/AO
- **Science Advisory Board Reforms**
  - Kevin Yamada/ORP

-Aaron

From: Ringel, Aaron
Sent: Tuesday, November 21, 2017 9:27 AM
To: Beck, Nancy <beck.nancy@epa.gov>; Sarah A. Greenwalt (greenwalt.sarah@epa.gov) <greenwalt.sarah@epa.gov>; Lee Forsgren (Forsgren.Lee@epa.gov) <Forsgren.Lee@epa.gov>; Kelly, Albert <kelly.albert@epa.gov>; Bolen, Brittany <bolen.brittany@epa.gov>; Mandy Gunasekara (Gunasekara.Mandy@epa.gov) <Gunasekara.Mandy@epa.gov>
Cc: Troy Lyons (lyons.troy@epa.gov) <lyons.troy@epa.gov>; Christian Rodrick (Rodrick.Christian@epa.gov) <Rodrick.Christian@epa.gov>; Shimmin, Kaitlyn <shimmin.kaitlyn@epa.gov>; Dravis, Samantha <dravis.samantha@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>; Lovell, Will (William) <lovell.william@epa.gov>; Falvo, Nicholas <falvo.nicholas@epa.gov>
Subject: FW: Issue Memos/Talkers Needed for 12/7 E&C Hearing

After speaking with Troy and additional staff we added a couple other topics that are most likely going to need memos/talkers on for the hearing. Adding Samantha and Brittany as well s

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

I've only included people on this email chain that have additional topics (noted below) added to our previous list so we don't spam everyone's Outlook. We are still hoping to have these all put together and over to Troy and I in OCIR by this Wednesday, 11/22. Let me know if you have any questions. Thanks again for everyone's assistance!

-Aaron

Additional Memo Topics & Staff/Office Drafting

- **California CAA Waiver**
  - Mandy Gunasekara/OAR
- **PRIA Update**

- Nancy/OCSPP

- **Chlorpyrifos**

- Nancy/OCSPP

- **Lead and Copper Rule**

- Lee Forsgren & Sarah Greenwalt/OW

- **Brownfields**

- Kell Kelly/AO/OLEM

- **Environmental Justice**

- Brittany Bolen & Samantha Dravis/OP

From: Ringel, Aaron
Sent: Monday, November 20, 2017 12:34 PM
To: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>; Kelly, Albert <kelly.albert@epa.gov>; Forsgren, Lee <Forsgren.Lee@epa.gov>; Greenwalt, Sarah <greenwalt.sarah@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Bodine, Susan <bodine.susan@epa.gov>; Traylor, Patrick <traylor.patrick@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Shimmin, Kaitlyn <shimmin.kaitlyn@epa.gov>; Rodrick, Christian <rodrick.christian@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>; Falvo, Nicholas <falvo.nicholas@epa.gov>
Subject: Issue Memos/Talkers Needed for 12/7 E&C Hearing
Importance: High

All,

In preparation for the Administrator testifying before the House Energy and Commerce Committee on December 7th we will need your assistance in putting together a series of 1-page memos with talking points on issues in your program offices. Troy and I have come up with a list of likely topics that will come up during the hearing (outlined below), if there any that we have missed that you think will be needed feel free to shoot us a note and include them as well.

Ex. 5 - Deliberative Process

We are looking to have these all put together and over to Troy and I in OCIR by this Wednesday, 11/22. I know with Thanksgiving on Thursday that this is short turnaround but we really appreciate everyone's assistance. Please feel free to let me know if you have any questions.

Memo Topic & Staff/Office Drafting

- **Sue and Settle Directive**
  - Eric Baptist/OGC
- **Science Advisory Board Reforms**
  - Kevin Yamada/ORP
- **Clean Power Plan**
  - Mandy Gunasekara/OAR
- **RFS/RVOs**
  - Mandy Gunasekara/OAR
- **California CAA Waiver**
  - Mandy Gunasekara/OAR
- **Superfund Task Force**
  - Kell Kelly/AO/OLEM
- **Brownfields**
  - Kell Kelly/AO/OLEM

•□□□□□□□ **Enforcement Activities**

o Patrick Traylor & Susan Bodine/OECA

•□□□□□□□ **WOTUS**

o Lee Forsgren & Sarah Greenwalt/OW

•□□□□□□□ **WIFIA**

o Lee Forsgren/OW

•□□□□□□□ **Lead and Copper Rule**

o Lee Forsgren & Sarah Greenwalt/OW

•□□□□□□□ **Chemicals/TASCA Update**

o Nancy Beck/OCSPP

•□□□□□□□ **PRIA Update**

o Nancy/OCSPP

•□□□□□□□ **Chlorpyrifos**

o Nancy/OCSPP

•□□□□□□□ **CERCLA 108(b) rule**

o Byron Brown/AO

•□□□□□□□ **Environmental Justice**

o Brittany Bolen & Samantha Dravis/OP

Best,

Aaron

_____

Aaron E. Ringel

Deputy Associate Administrator

Office of Congressional & Intergovernmental Relations

U.S. Environmental Protection Agency

W: 202.564.4373

Ringel.Aaron@epa.gov

:HYH└ PDGH└ VRPH└ FKDQJHV(3$VWRJRY◄ └ ,I└ WKH└ LQIRUPDWLRQ└ \RX└ DUH└ ORRNLQJ└ IRU└ PD\└ EH└ DEOH└ WR└ ILQG(3$W└:HE$UFKLYHRU└ WKH└ -DQXDU\└ ¶┘└ ‼☼¶└ ↳└ └ :HE└ 6QDSVKRW

1HZV└ 5HOHDVHV└ IURP└ 5HJLRQ└ ‼ ┬

8◄ 6◄ └ (3$└ 6HWWOHV└ ZLWK└ 3DUWLHV└ RQ└ &OHDQXS└ 3ODQ└)RU└ ├ ←WK└ 6WUHHW└ 6XSHUIXQG└ 6LWH└ LQ└ 0DU\ODQG└

¶ ‼ ↕ ¶ ┬ ↕ ┴ ‼ ¶ →

&RQWDFW└ ,QIRUPDWLRQ └
5R\└ 6HQHFDVHQHFD◄ UR\#HSD◄ JRY
┴ ¶ ↑ ┼ ← ¶ ┤ ┼ ↑ ↑ ├ →

3+,/$'(/3+,$└ ♂ 2FW◄ └ ¶ ┬ ☼ ±7KH└ 8◄ 6◄ └ (QYLURQPHQWDO└ 3URWHFWLRQ└ $JHQF\└ DQQRXQ VHWWOHPHQW└ WRGD\└ ZLWK└ PRUH└ WKDQ└ ┤ ‼ └ SDUWLHV└ WR└ FOHDQ└ XS└ KD]DUGRXVWK ZDVWH 6WUHHW└ 'XPS↕ ,QGXVWULDO└ (QWHUSULVHV└ 6XSHUIXQG└ 6LWH└ LQ└ %DOWLPRUH└ &RXQW\☼ └ 0DU

8QGHU└ WHUPV└ RI└ WKH└ SURSRVHG└ FRQVHQW└ GHFUHH└ ILOHG└ LQ└ IHGHUDO└ FRXUW└ LQ└ %DO UHVSRQVLEOH└ WR└ ILQDQFH└ DQG└ SHUIRUP└ D└ • ↑ ¶ ◄ ↑ └ PLOOLRQ└ (3$┼ DSSURYHG└ FOHD UHVRXUFHV└ UHVWRUDWLRQ└ ZRUN☼ └ DQG└ SD\└ WKH└ VWDWH└ DQG└ IHGHUDO└ QDWXUDO└ UHVRXU DQG└ IXWXUH└ FRVWV└ UHODWHG└ WR└ QDWXUDO└ UHVRXUFH└ GDPDJHV◄ └ 'HIHQGDQWV└ DUH└ DOVR DQ└ RII┼ VLWH└ UHVWRUDWLRQ└ SURMHFW◄

7KH└ ¶ ┴ └ SDUWLHV└ WKDW└ DUH└ UHVSRQVLEOH└ IRU└ SHUIRUPLQJ└ WKH└ FOHDQXS└ LQFOXGH 0DUNHWV└ ,QF◄ └ $.└ 6WHHO└ &RUSRUDWLRQ └ %URZQLQJ┼)HUULV☼ └ ,QF◄ └ %ODFN└ └ &RUSRUDWLRQ └ &RQ$JUD└ *URFHU\└ 3URGXFWV└ &RPSDQ\☼ └ //& └ &URZQ└ &RUN└ └ 6HDO└ 5HDOW\└ 'HYHORSPHQW☼ └ //& └ &6;└ 7UDQVSRUWDWLRQ☼ └ ,QF◄ └ ([[RQ└ 0RELO└ &RUSRUD :RUNV└ ,QF◄

$ORQJ└ ZLWK└ WKHVH└ ¶ ┴ └ SDUWLHV☼ └ WKH└ RWKHU└ UHPDLQLQJ└ SDUWLHV└ FRQWULEXWHG└ DE VHWWOHPHQW◄

7KH└ ├ WK 6WUHHW└ 6LWH└ HQFRPSDVVHV└ VHYHUDO└ ODQGILOOV└ VSUHDG└ RYHU└ ┘ DFUHV└ └ 0DU └)URP└ WKH└ ¶ ↑ ‼ V└ WKURXJK└ WKH└ ¶ → ‼ V☼ └ WKHVH└ ODQGILOOV└ DFFHSWHG└ LQGX\ FRQWDLQLQJ└ KD]DUGRXV└ ZDVWHV☼ └ ZKLFK└ FRQWDPLQDWHG└ VRLO☼ └ VHGLPHQW☼ └ JURXQGZDW ZHWODQG└ DUHDV◄ └

(3$└ DQG└ 0DU\ODQG└ KDYH└ EHHQ└ LQYROYHG└ LQ└ FOHDQXS└ DFWLYLWLHV└ DW└ WKH└ VLWH└ IR
WKH└ 0DU\ODQG└ 'HSDUWPHQW└ RI└ WKH└ (QYLURQPHQW└ FRQGXFWHG└ VHYHUDO└ HPHUJHQF\└ FOHD
LQFOXGHG└ UHPRYLQJ└ PRUH└ WKDQ└ ↑ ‼ └ RI└ WKH└ ↑ ↑ ┼ JDOORQ└ GUXPV└ RI└ DVVRUWHG└ ZD
FRQVHQW└ RUGHU☼ └ VHYHUDO└ SDUWLHV└ UHPRYHG└ FRQWDPLQDWHG└ VXUIDFH└ VRLOV☼ └ FRQWDLQ
GUXPV└ DQG└ EDWWHULHV└ IURP└ WKH└ VLWH◄ └ 2Q└ 6HSW◄ └ ┬ ‼ ☼ └ ┴ ‼ ¶ ┬ ☼ └ WKH└ (3$└
ZLOO└ EH└ ILQDOL]HG└ DQG└ FRPSOHWHG└ SXUVXDQW└ WR└ WKLV└ VHWWOHPHQW◄

7KH└ FOHDQXS└ SODQ└ LQFOXGHV☼ └ DPRQJ└ RWKHU└ UHTXLUHPHQWV

- á ,QVWDOOLQJ└ D└ VRLO└ FDS└ RYHU└ FRQWDPLQDWHG└ VRLO└ DQG└ ODQGILOO└ DUHDV
- á ([FDYDWLQJ└ DQG└ UHPRYLQJ└ FRQWDPLQDWHG└ VRLO└ KRWVSRWV└ DQG└ SRQG└ VHGLPHQW
- á 5HPRYLQJ└ DQG└ UHF\FOLQJ└ VXUIDFH└ GHEULV
- á &ROOHFWLQJ└ DQG└ WUHDWLQJ└ OHDFKDWH└ DQG└ FRQWDPLQDWHG└ JURXQG└ ZDWHU└ IURP└ WK
  HQKDQFHG└ ZHWODQGV☼ └ D└ ELRZDOO☼ └ DQG└ WUHDWPHQW└ DW└ D└ ORFDO└ ZDVWHZDWHU└ V
- á 5HVWRULQJ└ VWUHDP└ EDQNV└ DQG└ UHYHJHWDWLQJ└ WKH└ FDSSHG└ ODQGILOOV└ ZLWK└ WUH
  YHJHWDWLRQ◄

7KH└ DJUHHPHQW└ DQQRXQFHG└ WRGD\└ ZDV└ UHDFKHG└ XQGHU└ WKH└ IHGHUDO└ 6XSHUIXQG└ ODZ
WKH└ &RPSUHKHQVLYH└ (QYLURQPHQWDO└ 5HVSRQVLELOLW\☼ └ &RPSHQVDWLRQ☼ └ DQG└ /LDELOLW\
ZKLFK└ UHTXLUHV└ ODQGRZQHUV☼ └ ZDVWH└ JHQHUDWRUV└ DQG└ ZDVWH└ WUDQVSRUWHUV└ UHVSRQVL
6XSHUIXQG└ VLWH└ WR└ FOHDQ└ XS└ WKH└ VLWH☼ └ RU└ UHLPEXUVH└ WKH└ JRYHUQPHQW└ RU└ RWK
6HH└ KWWSV ↕ ↕ ZZZ◄ HSD◄ JRY↕ ◄VXSHUIXQG

7KH└ SURSRVHG└ FRQVHQW└ GHFUHH└ LV└ VXEMHFW└ WR└ D└ ┬ ‼ ┼ GD\└ SXEOLF└ FRPPHQW└ SHUL
)RU└ PRUH└ LQIRUPDWLRQ└ DERXW└ WKLV└ VLWH└ DQG└ KWWSV ↕ FXPXOXV◄HSD◄JRY↕ VXSHUIXQG↕ ├ ·

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'HSDUWPHQW└ RI└ -XVWLFH

2IILFH└ RI└ 3XEOLF└ $IIDLUV

)25└ ,00(',$7(└ 5(/($6(7XHVGD\ └ 2FWREHU└ ┬ ¶ }

8QGHU└ $JUHHPHQW└ :LWK└ WKH└ -XVWLFH└ 'HSDUWPHQW└ DQG└ (QYLURQPHQWDO└ 3URWHFWLRQ└ $JHQF\ └ ([[RQRELO└ WR└ 5HGXFH└ +DUPIXO└ $LU└ 3ROOXWLRQ└ DW└ (LJKW└ 8◀ 6◀ └ &KHPLFDO└ 3ODQWV

7KH└ 'HSDUWPHQW└ RI└ -XVWLFH└ WKH└ 8◀ 6◀ └ (QYLURQPHQWDO└ 3URWHFWLRQ└ $JHQF\ └ ♂ (3$□ └ DQG└ WKH 'HSDUWPHQW└ RI└ (QYLURQPHQWDO└ 4XDOLW\ └ ♂ /'(4□ └ DQGRXQFHG└ D└ VHWWOHPHQW└ WRGD\ └ ZLWK└ ([[RQ└ 0RE ([[RQRELO└ 2LO└ &RUS◀ └ ♂ ([[RQRELO□ └ WKDW└ ZLOO└ HOLPLQDWH└ WKRXVDQGV└ RI└ WRQV└ RI└ KDUPIXO└ RI└ ([[RQ∂V└ SHWURFKHPLFDO└ PDQXIDFWXULQJ└ IDFLOLWLHV└ LQ└ 7H[DV└ DQG└ /RXLVLDQD◀ └ 7KH└ VHWWOHPHQ DOOHJDWLRQV└ WKDW└ ([[RQRELO└ YLRODWHG└ WKH└ &OHDQ└ $LU└ $FW└ E\└ IDLOLQJ└ WR└ SURSHUO\└ RSHUDWH└ I ICDUHV└ DW└ WKHLU└ SHWURFKHPLFDO└ IDFLOLWLHV└ └ ZKLFK└ UHVXOWHG└ LQ└ H[FHVV└ HPLVVLRQV└ RI└ KDUPIXO

([[RQRELO└ ZLOO└ VHQG└ DSSUR[LPDWHO\ • ┬ ‼ ‼ └ PLOOLRQ└ WR└ LQWDOO└ DQG└ RSHUDWH└ DLU└ SROOXWLR WHFKQRORJ\└ WR└ UHGXFH└ KDUPIXO└ DLU└ SROOXWLRQ└ IURP└ ┴ ├ └ LQGXVWULDO└ ICDUHV└ DW└ ILYH└ ([[RQRE 7H[DV≤ORFDWHG└ QHDU└ %D\WRZQ└ └ %HDXPRQW└ └ DQG└ 0RQW└ %HOYLHX≤DQG└ WKUHH└ RI└ WKH└ FRPSDQ\∂V└ II 5RXJH└ └ /RXLVLDQD◀ └

2QFH└ IXOO\└ LPSOHPHQWHG└ └ WKH└ SROOXWLRQ└ FRQWUROV└ UHTXLUHG└ E\└ WKH└ VHWWOHPHQW└ DUH└ HVWLPDWHG DLU└ HPLVVLRQV└ RI└ YRODWLOH└ RUJDQLF└ FRPSRXQGV└ ♂ 92&V□ └ E\└ PRUH└ WKDQ└ → ‼ ‼ ‼ └ WRQV└ SHU└ DOVR└ H[SHFWHG└ WR└ UHGXFH└ WR[LF└ DLU└ SROOXWDQWV└ └ LQFOXGLQJ└ EHQ]HQH└ └ E\└ PRUH└ WKDQ└ ¶ ↑ ‼

7KH└ /RXLVLDQD└ 'HSDUWPHQW└ RI└ (QYLURQPHQWDO└ 4XDOLW\ └ LV└ DOVR└ D└ VLJQDWRU\└ RI└ WRGD\∂V└ VHWWOH UHVROYHV└ DOOHJHG└ YLRODWLRQV└ RI└ /RXLVLDQD└ CDZ└ DW└ ([[RQRELO∂V└ WKUHH└ SODQW└ LQ└ %DWRQ└ 5RX

≥7KLV└ VHWWOHPHQW└ ZLOO└ LPSURYH└ DLU└ TXDOLW\ └ LQ└ 7H[DV└ DQG└ /RXLVLDQD└ E\└ HOLPLQDWLQJ└ WKRXVD DLU└ SROOXWLRQ└ HDFK└ \HDU↑ ¥ └ VDLG└ $FWLQJ└ $VVLWDQW└ $WWRUQH\└ *HQHUDO└ -HIIUH\└ +◀ └ :RRG└ RI└ 1DWXUDO└ 5HVRXUFHV└ 'LYLVLRQ└ RI└ WKH└ 'HSDUWPHQW└ RI└ -XVWLFH◀ └ └ ≥7KH└ DJUHHPHQW↑ └ ZKLFK└ UHTX HPLVVLRQV└ IURP└ LWV└ IDFLOLWLHV└ LQ└ 7H[DV└ DQG└ /RXLVLDQD↑ └ GHPRQVWUDWHV└ WKH└ -XVWLFH└ 'HSDUWPH HII RUWV↑ └ DCRQJVLGH└ (3$└ DQG└ RXU└ WDWH└ SDUWQHUV↑ └ WR└ SURWHFW└ WKH└ $PHULFDQ└ SXEOLF└ IURP└ WI E\└ EULQJLQJ└ VRXUFHV└ RI└ DLU└ SROOXWLRQ└ LQWR└ FRPSOLDQFH└ ZLWK└ WKH└ &OHDQ└ $LU└ $FW◀ ¥

≥7KLV└ VHWWOHPHQW└ PHDQV└ FOHDQHU└ DLU└ IRU└ FRPPXQLWLHV└ DFURVV└ 7H[DV└ DQG└ /RXLVLDQD↑ └ DQG└ UH FRPPLWPHQW└ WR└ HQIRUFH└ WKH└ CDZ└ DQG└ KROG└ WKRVH└ ZKR└ YLRODWH└ LW└ DFFRXQWDEOH↑ ¥ └ VDLG└ (3$└ 3UXLWW◀ └ ≥$V└ WKLV└ DJUHHPHQW└ VKRZV↑ └ (3$└ LV└ GHGLFDWHG└ WR└ SURWHFWLQJ└ ZLWK└ WDWHV└ WR└ DGG HQYLURQPHQWDO└ LWXHV└ DQG└ LPSURYLQJ└ FRPSOLDQFH└ LQ└ WKH└ UHJXODWHG└ FRPPXQLWLHV└ WR└ SUHYHQW└ IXWX WKH└ CDZ◀ ¥

≥/'(4└ LV└ DOZD\V└ KDSS\└ WR└ FRRSHUDWH└ ZLWK└ RXU└ IHGHUDO└ SDUWQHUV└ LQ└ LQYHVWLJDWLQJ└ HQYLURQP VDLG└ 'U◀ └ &KXFN└ &DUU└ %URZQ↑ └ 6HFUHWDU\└ RI└ WKH└ /'(4◀ └ └ ≥7KLV└ VHWWOHPHQW└ ZLOO└ EHQHILW└ W

/RXLVLDQD¤ DQG WKH %HQHILFLDO (QYLURQPHQWDO 3URMHFWV LQFOXGHG LQ WKH VHWWOHPHQW ZLOO HQ
VXUYHLOODQFH DQG HQIRUFHPHQW FDSDELOLWLHV◄ ¥

7KHVH SROOXWDQWV FDQ FDXVH VLJQLILFDQW KDUP WR SXEOLF KHDOWK◄ 92&V DUH D NH\ FRPSRQHQ
VPRJ RU JURXQG OHYHO R]RQH¤ D SROOXWDQW WKDW LUULWDWHV WKH OXQJV¤ H[DFHUEDWHV GLVHDVH
FDQ LQFUHDVH VXVFHSWLELOLW\ WR UHVSLUDWRU\ LOOQHVVHV¤ VXFK DV SQHXPRQLD DQG EURQFKLWLV◄
EHQ]HQH¤ ZKLFK (3$ FODVVLILHV DV D FDUFLQRJHQ¤ FDQ FDXVH QXPHURXV KHDOWK LPSDFWV¤ LQ
DQG DGYHUVH UHSURGXFWLYH HIIHFWV LQ ZRPHQ◄

)ODUHV DUH GHYLFHV XVHG WR FRPEXVW ZDVWH JDVHV WKDW ZRXOG RWKHUZLVH EH UHOHDVHG LQWR \
GXULQJ FHUWDLQ LQGXVWULDO RSHUDWLRQV◄ :HOO RSHUDWHG IODUHV VKRXOG KDYH KLJK ≥FRPEXVWLRQ
PHDQLQJ WKH\ FRPEXVW QHDUO\ DOO KDUPIXO ZDVWH JDV FRQVWLWXHQWV¤ OLNH 92&V DQG KD]DUGRX
DQG WXUQLQJ WKHP LQWR ZDWHU DQG FDUERQ GLR[LGH◄ 7KH DJUHHPHQW LV GHVLJQHG WR LPSURYH
SUDFWLFHV◄)LUVW¤ LW UHTXLUHV ([[RQ WR PLQLPL]H WKH DPRXQW RI ZDVWH JDV WKDW LV VHQ
([[RQ PXVW LPSURYH WKH FRPEXVWLRQ HIILFLHQF\ RI LWV IODUHV◄

,Q RUGHU WR PLQLPL]H WKH ZDVWH JDV VHQW WR WKH IODUHV¤ ([[RQ ZLOO FUHDWH ZDVWH PLQL
IDFLOLW\◄ $W IRXU RI WKH IDFLOLWLHV¤ ([[RQ ZLOO RSHUDWH IODUH JDV UHFRYHU\ V\VWHPV
ZDVWH JDV VHQW WR WKH IODUHV E\ UHFRYHULQJ DQG UHF\FOLQJ WKH JDVHV EHIRUH WKH\ DUH V
IODUH◄ 7KH IODUH JDV UHFRYHU\ V\VWHPV ZLOO DOORZ ([[RQ0RELO WR UHXVH WKHVH JDVHV DV I
D SURGXFW IRU VDOH◄ ,Q RUGHU WR LPSURYH FRPEXVWLRQ HIILFLHQF\¤ ([[RQ0RELO PXVW DOVR L
LQVWUXPHQWV DQG PRQLWRULQJ V\VWHPV WR HQVXUH WKDW JDVHV WKDW DUH VHQW WR IODUHV DUH H
([[RQ0RELO ZLOO SHUIRUP DLU TXDOLW\ PRQLWRULQJ WKDW LV GHVLJQHG WR GHWHFW WKH SUHVHQFH
IHQFH OLQHV RI IRXU RI WKH FRYHUHG SODQWV¤ DQG SD\ D FLYLO SHQDOW\ RI • ⊥ ◄ ↑ PLOOL

7RGD\∂V VHWWOHPHQW DOVR UHTXLUHV ([[RQ0RELO WR VSHQG • ¶ PLOOLRQ RQ D VXSSOHPHQWDO HQ
WR SODQW WUHHV LQ WKH &LW\ RI %DWRQ◄ 7KH WUHHV ZLOO SURYLGH D QDWXUDO EXIIHU WR U
IURP WKH FKHPLFDO SODQWV WR QHDUE\ FRPPXQLWLHV◄

7KH /'(4 ZLOO UHFHLYH • ┤ → ‼ ¤ ‼ ‼ ‼ RI WKH • ⊥ ◄ ↑ PLOOLRQ WRWDO FLYLO SHQDOW\¤ DQG
≥EHQHILFLDO HQYLURQPHQWDO SURMHFWV¤ ¥ LQFOXGLQJ SXUFKDVLQJ D • ¶ ◄ ↑ PLOOLRQ PRELOH DLU
IRU /'(4∂V XVH◄

7KH FRQVHQW GHFUHH¤ ORGJHG LQ WKH 6RXWKHUQ 'LVWULFW &RXUW RI 7H[DV¤ LV VXEMHFW WR D
SHULRG DQG ILQDO FRXUW DSSURYDO◄ 7KH FRQVHQW GHFUHH ZLOO EH DYDLODEOH IRU YLHZLQJ DW
KWWSV ↕ ↕ ZZZ◄ MXVWLFH◄ JRY↕ HQUG↕ FRQVHQW┤ GHFUHHV

0RUH LQIRUPDWLRQ DERXW WKH VHWWOHPHQW ↕ ↕ ZZZ◄ HSD◄ JRY↕ HQIRUFHPHQW↕ H[[RQ┤ PRELO┤
FRUSRUDWLRQH[[RQPRELO┤ RLO┤ FRUSRUDWLRQ┤ FOHDQ┤ DLU┤ DFW┤ VHWWOHPHQW

$WWDFKPHQW♂ V⊡
'RZQORDG &RQVHQW 'HFUHH

7RSLF♂ V⊡
(QYLURQPHQW

&RPSRQHQW♂ V⊡
(QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ

3UHVV 5HOHDVH 1XPEHU
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'HSDUWPHQW RI -XVWLFH

2IILFH RI 3XEOLF $IIDLUV

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8QLWHG 6WDWHV)LOHV &RPSODLQW $JDLQVW)LDW &KU\VOHU $XWRPRELOHV IRU $OOHJHG &OHDQ $LU $FW 9LRODWLRQV

7KH 'HSDUWPHQW RI -XVWLFH RQ EHKDOI RI WKH (QYLURQPHQWDO 3URWHFWLRQ $JHQF\ (3$ FRPSODLQW LQ IHGHUDO FRXUW LQ 'HWURLW 0LFKLJDQ DJDLQVW)&$ 86 //&)LDW &KU\VOHU 0RWRUL 6 S $ DQG 9 0 1RUWK $PHULFD ,QF FROOHFWLYHO\ UHIHUUHG WR DV)&$ QHDUO\ ¶ OLJKW GXW\ GLHVHO YHKLFOHV FRQWDLQLQJ OLWHU (FR'LHVHO HQJLQHV IXQFWLRQV WKDW ZHUH QRW GLVFORVHG WR UHJXODWRUV GXULQJ WKH FHUWLILFDWLRQ DSSOLFDWLRQ SUR YHKLFOHV FRQWDLQ GHIHDW GHYLFHV 7KH FRPSODLQW DOOHJHV WKDW WKH XQGLVFORVHG VRIWZDUH YHKLFOHV∂ HPLVVLRQ FRQWURO V\VWHPV WR SHUIRUP GLIIHUHQWO\ DQG OHVV HIIHFWLYHO\ GXULQ FRQGLWLRQV WKDQ RQ IHGHUDO HPLVVLRQ WHVWV UHVXOWLQJ LQ LQFUHDVHG HPLVVLRQV RI KDUPIXO

7KH &OHDQ $LU $FW UHTXLUHV YHKLFOH PDQXIDFWXUHUV WR REWDLQ D FHUWLILFDWH RI FRQIRUPLW\ YHKLFOH LQWR FRPPHUFH E\ GHPRQVWUDWLQJ WR (3$ WKDW WKH YHKLFOH ZLOO PHHW DSSOLFDEOH VWDQGDUGV WR FRQWURO DLU SROOXWLRQ 0DQXIDFWXUHUV PXVW GLVFORVH LQ WKHLU FHUWLILFDWLRQ HPLVVLRQ FRQWURO GHYLFHV H J FRPSXWHU VRIWZDUH WKDW DIIHFW WKH SHUIRUPDQFH RI HPLV XSRQ RSHUDWLQJ SDUDPHWHUV RI WKH YHKLFOH MXVWLI\ WKH SUHVHQFH RI DQ\ VXFK GHYLFHV WKDW UHGXFH WKH HIIHFWLYHQHVV RI HPLVVLRQ FRQWUROV DUH QRW ≥GHIHDW GHYLFHV ¥ 0RWRU GHIHDW GHYLFHV FDQQRW EH FHUWLILHG

7KH FRPSODLQW DOOHJHV WKDW)&$ HTXLSSHG QHDUO\ ¶ 5DP ¶ DQG -HHS *UD 0RGHO <HDUV ¶ VROG LQ WKH 8QLWHG 6WDWHV ZLWK DW OHDVW HLJKW VRIWZD GLVFORVHG LQ)&$∂V DSSOLFDWLRQV IRU FHUWLILFDWHV RI FRQIRUPLW\ DQG WKDW DIIHFW WKH YHK V\VWHPV 7KH XQGLVFORVHG VRIWZDUH IHDWXUHV OHVVHQ WKH HIIHFWLYHQHVV RI WKH YHKLFOHV∂ V\VWHPV GXULQJ FHUWDLQ QRUPDO GULYLQJ VLWXDWLRQV 7KLV UHVXOWV LQ FDUV WKDW PHHW HPL ODERUDWRU\ DQG GXULQJ VWDQGDUG (3$ WHVWLQJ EXW GXULQJ FHUWDLQ QRUPDO RQ URDG GULYLQJ QLWURJHQ 12[WKDW DUH PXFK KLJKHU WKDQ WKH (3$ FRPSOLDQW OHYHO 7KH FRPSODLQW D WKHVH YHKLFOHV GLIIHUV PDWHULDOO\ IURP WKH VSHFLILFDWLRQV SURYLGHG WR (3$ LQ WKH FHUWLI WKXV WKH FDUV DUH XQFHUWLILHG LQ YLRODWLRQ RI WKH &OHDQ $LU $FW 7KHVH DOOHJDWLRQ VHW IRUWK LQ QRWLFH RI YLRODWLRQ ≥129¥ WKDW (3$ LVVXHG WR)&$ 86 //& DQG)&$

)ROORZLQJ WKH LVVXDQFH RI WKH 129 (3$ FRQWLQXHG LWV LQYHVWLJDWLRQ LQWR WKH RSHUDWLRQ VRIWZDUH EDVHG IHDWXUHV %DVHG XSRQ WKLV LQYHVWLJDWLRQ WKH FRPSODLQW DOOHJHV WKDW R XQGLVFORVHG VRIWZDUH IHDWXUHV DORQH RU LQ FRPELQDWLRQ ZLWK RWKHUV UHQGHUV LQRSHU DQG RU GHIHDWV WKH YHKLFOHV∂ HPLVVLRQ FRQWURO V\VWHPV ZKLFK ZHUH LQWDOOHG WR PDNH ZLWK &OHDQ $LU $FW HPLVVLRQ VWDQGDUGV ,Q VKRUW WKH FRPSODLQW QRZ DOOHJHV WKDW WK GHYLFHV

12[SROOXWLRQ FRQWULEXWHV WR WKH IRUPDWLRQ RI KDUPIXO VPRJ DQG VRRW ☼ H[SRVXUH WR ZKLF
QXPEHU RI UHVSLUDWRU\ ┼ DQG FDUGLRYDVFXODU ┼ UHODWHG KHDOWK HIIHFWV DV ZHOO DV SUHPDWXUH (
DGXOWV ☼ SHRSOH ZKR DUH DFWLYH RXWGRRUV ♂ LQFOXGLQJ RXWGRRU ZRUNHUV □ ☼ DQG SHRSOH ZLWK
DUH SDUWLFXODUO\ DW ULVN IRU KHDOWK HIIHFWV UHODWHG WR VPRJ RU VRRW H[SRVXUH◂ 1LWURJH
HPLVVLRQV FDQ DJJUDYDWH UHVSLUDWRU\ GLVHDVHV ☼ SDUWLFXODUO\ DVWKPD ☼ DQG PD\ DOVR FRQWULE
GHYHORSPHQW LQ FKLOGUHQ◂

7KH FLYLO FRPSODLQW ILOHG WRGD\ VHHNV LQMXQFWLYH UHOLHI DQG WKH DVVHVVPHQW RI FLYLO SH
6WDWHV DOVR ILOHG D QRWLFH WKDW LW ZLOO UHTXHVW WR WUDQVIHU LWV FDVH DQG IXOO\ SDUWL
SURFHHGLQJV QRZ LQLWLDWHG LQ WKH UHODWHG PXOWL┼ GLVWULFW OLWLJDWLRQ LQ WKH 1RUWKHUQ 'LVW

(3$ DQG WKH &DOLIRUQLD $LU 5HVRXUFHV %RDUG DUH FRQWLQXLQJ LQ WKHLU GLVFXVVLRQV ZLWK)&
VXEMHFW YHKLFOHV LQWR FRPSOLDQFH ZLWK WKH &OHDQ $LU $FW DQG &DOLIRUQLD ODZ◂ 7KH ODW
UHVROXWLRQ RI WKLV LVVXH DUH XQFHUWDLQ◂

$WWDFKPHQW♂ V□
'RZQORDG &RPSODLQW

7RSLF♂ V□
&RQVXPHU 3URWHFWLRQ
(QYLURQPHQW

&RPSRQHQW♂ V□
(QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ

3UHVV 5HOHDVH 1XPEHU
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8SGDWHG 0D\ ┴┬ ☼ ┴!

:HYH PDGH VRPH FKDQJHV WR (3$ JRY ,I WKH LQIRUPDWLRQ \RX DUH ORRNLQJ IRU PD\ EH DEOH WR ILQG (3$:HE $UFKLYH RU WKH -DQXDU\ ¶ ‼ ¶ :HE 6QDSVKRW

EPA United States Environmental Protection Agency

1HZV 5HOHDVHV IURP 5HJLRQ ‼

(3$ $QQRXQFHV 6HWWOHPHQW ZLWK 0DF\∂V +D]DUGRXV :DVWH 9LRODWLRQV

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&RQWDFW ,QIRUPDWLRQ
-HQQDK 'XUDQW RU -RH -XEEDUGV#HSD JRY
┴ ¶ ┤ ├ ├ ↑ ┼ ┴ ┴ ‼ ‼

'$//$6 ±2FW ↑ ☼ ┴ ‼ ¶ → 7RGD\☼ WKH 8 6 (QYLURQPHQWDO 3URWHFWLRQ VHWWOHPHQW ZLWK 0DF\∂V 5HWDLO +ROGLQJV☼ ,QF ☼ 0DF\∂V RYHU YLRODWLRQ UHJXODWLRQV ,Q DGGLWLRQ WR FRUUHFWLQJ YLRODWLRQV☼ 0DF\∂V ZLOO DOVR GHY WR WUDLQ ┤ ‼ ‼ UHWDLOHUV LQ 2NODKRPD DQG 7H[DV☼ DQG FRQGXFW WKLUG┼ SDUW IDFLOLWLHV ZLWKLQ 7H[DV☼ 2NODKRPD☼ /RXLVLDQD DQG 1HZ 0H[LFR☼ DPRQJ RWKHU FRPSDQ\ ZLOO DOVR SD\ D • ┬ → ↑ ☼ ‼ ‼ ‼ FLYLO SHQDOW\ ZLWKLQ ┬ ‼ GD\V R DQG PXVW FRPSO\ ZLWK DOO RWKHU UHTXLUHPHQWV ZLWKLQ RQH \HDU

≥(3$ WDNHV KD]DUGRXV ZDVWH UHJXODWLRQV VHULRXVO\☼ DQG ZH DSSUHFLDWH FRPSD WR FRUUHFW YLRODWLRQV☼ ¥ VDLG $GPLQLVWUDWRU 6FRWW 3UXLWW ≥$SSURSULDWHO\ IURP µFUDGOH┼ WR┼ JUDYH∂ LV YLWDO WR SURWHFWLQJ SHRSOH∂V KHDOWK DQG WKH

≥:H DSSUHFLDWH (3$∂V ZLOOLQJQHVV WR XVH RXU VXJJHVWLRQ DQG RIIHU 0DF\∂ VXSSOHPHQWDO HQYLURQPHQWDO SURMHFW LQYROYLQJ FRPSOLDQFH WUDLQLQJ LQVWHDG RI 2NODKRPD 'HSDUWPHQW RI (QYLURQPHQWDO 4XDOLW\ ([HFXWLYH 'LUHFWRU 6FRWW 7KRPSV VHWWOHPHQW KLJKOLJKWV WKH LPSRUWDQFH RI VWDWHV DQG (3$ ZRUNLQJ WRJHWKHU R DSSURDFKHV WKDW UHVSHFW WKH QHHGV RI EXVLQHVVHV☼ ZKLOH VWLOO SURWHFWLQJ

(3$ HQIRUFHPHQW VWDII IRXQG 0DF\∂V KDG YLRODWHG WKH 5HVRXUFH &RQVHUYDWLRQ 5&5$ ☼ WKH IHGHUDO ODZ WKDW UHJXODWHV KD]DUGRXV DQG VROLG ZDVWHV☼ IR ┴ ‼ ¶ ↑ 'XULQJ WKHVH WLPHV☼ HDFK 0DF\∂V VWRUH LGHQWLILHG LQ WKH VHWW SRXQGV RI KD]DUGRXV ZDVWH WR TXDOLI\ DV D VPDOO┼ TXDQWLW\ JHQHUDWRU EXW DXWKRULWLHV 0DF\∂V DOVR IDLOHG WR PHHW WKH FRQGLWLRQV IRU VPDOO┼ TXDQWLW FRPSOHWH DSSURSULDWH PDQLIHVWV 2YHUDOO☼ 0DF\∂V JHQHUDWHG PRUH WKDQ ┴ ├ ZDVWH IURP ┴ ‼ ¶ ┴ ┼ ┴ ‼ ¶ ↑ IRU WKH ┤ ┤ ORFDWLRQV LGHQWLILHG LQ WKH VHW

$V└ SDUW└ RI└ WKH└ VHWWOHPHQW☼ └ 0DF\∂V└ ZLOO└ GHYHORS└ D└ SURJUDP└ WR└ WUDLQ└ DQ└
2NODKRPD└ DQG└ 7H[DV└ RQ└ KRZ└ WR└ FRPSO\└ ZLWK└ KD]DUGRXV└ ZDVWH└ UHTXLUHPHQWV◄ └ $
LQ└ 2NODKRPD└ DQG└ 7H[DV└ DQG└ ZLOO└ DOVR└ EH└ UHFRUGHG└ WR└ FUHDWH└ D└ ZHELQDU└ YHL
0DF\∂V└ ORFDWLRQV└ QDWLRQZLGH◄ └ $IWHU└ FRPSOHWLQJ└ WKH└ ¶ ¶ └ WKLUG┼ SDUW\└ DXGLWV
ZLWK└ DOO└ RI└ LWV└ RWKHU└ IDFLOLWLHV└ ♂ PRUH└ WKDQ└ ├ ┴ ‼ └ ORFDWLRQV└ RXWVLGH└ (3$
UHYLHZ└ WKH└ LVVXHV└ DQG└ DGGUHVV└ QRQFRPSOLDQFH◄ └ 0DF\∂V└ ZLOO└ DOVR└ SURPRWH└ WK
UHFRUGHG└ VHVVLRQV└ WR└ DSSURSULDWH└ SHUVRQQHO└ QDWLRQZLGH◄ └ %DVHG└ RQ└ WKH└ DYHUDJ
JHQHUDWLRQ└ DW└ WKH└ ┤ ┤ └ VWRUHV└ LQYROYHG└ LQ└ WKH└ VHWWOHPHQW☼ └ (3$└ HVWLPDWHV└
¶ ◄ ┴ └ PLOOLRQ└ SRXQGV└ RI└ KD]DUGRXV└ ZDVWH└ QDWLRQZLGH└ SHU└ \HDU◄

7KH└ 5HVRXUFH└ &RQVHUYDWLRQ└ DQG└ 5HFRYHU\└ $FW☼ └ SDVVHG└ E\└ &RQJUHVV└ LQ└ ¶ →
WR└ FRQWURO└ KD]DUGRXV└ ZDVWH└ IURP└ │ FUDGOH┼ WR┼ JUDYH◄ │ └ 5&5$└ VHWV└ QDWLRQDO└
KHDOWK└ DQG└ WKH└ HQYLURQPHQW└ IURP└ WKH└ SRWHQWLDO└ KD]DUGV└ RI└ ZDVWH└ GLVSRVDO☼
QDWXUDO└ UHVRXUFHV☼ └ UHGXFLQJ└ WKH└ DPRXQW└ RI└ ZDVWH└ JHQHUDWHG☼ └ DQG└ HQVXULQJ└
HQYLURQPHQWDOO\└ VRXQG└ PDQQHU◄

&RQQHFW└ ZLWK└ (3$└ 5HJLRQ└ ├ └

2Q└)DFHERRN└KWWSV ↕ ↕ ZZZ◄ IDFHERRN◄ FRP↕ HSDUHJLRQ├

2Q└ 7ZLWWHU└KWWSV ↕ ↕ WZLWWHU◄ FRP↕ (3$UHJLRQ├

$FWLYLWLHV└ LQ└ (3$└ 5HJLRQ└ ├└KWWSV ├ ↕ ↕└ ZZZ◄ HSD◄ JRY↕ DERXW┼HSD├UHJLRQ┼├┼VRXWK┼FHQWUDO

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'HSDUWPHQW RI -XVWLFH

2IILFH RI 3XEOLF $IIDLUV

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7KH -XVWLFH 'HSDUWPHQW¤ (QYLURQPHQWDO 3URWHFWLRQ $JHQF\ DQG 6WDWH RI &RORUDGR 5HDFK $JUHHPHQW :LWK 3'& (QHUJ\¤ ,QF◀ WR 5HVROYH /LWLJDWLRQ DQG 5HGXFH $LU 3ROOXWLRQ

7KH 'HSDUWPHQW RI -XVWLFH¤ WKH 8◀ 6◀ (QYLURQPHQWDO 3URWHFWLRQ $JHQF\ ♂ (3$□ ¤ DQG WKH WRGD\ DQQRXQFHG D VHWWOHPHQW ZLWK 'HQYHU┼ EDVHG 3'& (QHUJ\¤ ,QF◀ UHVROYLQJ &OHDQ $LU DOOHJHG LQ D FLYLO FRPSODLQW◀ 7KH FRPSODLQW ILOHG -XQH ┴ ├ ¤ ┴ ‼ ¶ → DOOHJHG WKDW 3 UHGXFH YRODWLOH RUJDQLF FRPSRXQGV ♂ 92&□ HPLVVLRQV IURP LWV RLO DQG JDV H[SORUDWLRQ DQ DFWLYLWLHV LQ WKH 'HQYHU DUHD◀

7KLV FDVH DURVH IURP D VHULHV RI &RORUDGR LQVSHFWLRQV WKDW IRXQG VLJQLILFDQW 92& HPLVV FRQGHQVDWH VWRUDJH WDQNV◀ 8QGHU WKH VHWWOHPHQW¤ 3'& ZLOO VSHQG DQ HVWLPDWHG • ¶ ← PL XSJUDGHV¤ LPSURYHG RSHUDWLRQV DQG PDLQWHQDQFH SUDFWLFHV¤ PRQLWRULQJ¤ DQG LQVSHFWLRQV WR HPLVVLRQV◀ 3'& ZLOO DOVR EH UHTXLUHG WR LPSOHPHQW HQYLURQPHQWDO PLWLJDWLRQ SURMHFWV DW IXUWKHU UHGXFH 92& DQG QLWURJHQ R[LGH ♂ 12[□ HPLVVLRQV DW D FRVW RI • ¶ ◀ → PLOOLRQ◀ • ┴ ◀ ↑ PLOOLRQ FLYLO SHQDOW\¤ ZKLFK ZLOO EH VSOLW HYHQO\ EHWZHHQ WKH 8QLWHG 6WDWHV D 7KH VWDWH∂V VKDUH RI WKH SHQDOW\ PD\ EH RIIVHW E\ XS WR • ¶ PLOOLRQ E\ SHUIRUPLQJ VXSSOHPHQWDO HQYLURQPHQWDO SURMHFWV◀

(3$ HVWLPDWHV WKDW PRGLILFDWLRQV WR WKH YDSRU FRQWURO V\VWHPV¤ DORQJ ZLWK RSHUDWLRQDO LPSURYHPHQWV DQG LQFUHDVHG PRQLWRULQJ¤ ZLOO UHGXFH 92& HPLVVLRQV E\ PRUH WKDQ ¶ ¤ ├ ‼ ‼ 3'& DOUHDG\ KDV EHJXQ WKLV ZRUN¤ ZKLFK PXVW EH FRPSOHWHG RQ D SKDVHG VFKHGXOH ZLWK ┬ ‼ ¤ ┴ ‼ ¶ IRU WKH ODVW SKDVH

≥$V D UHVXOW RI VWDWH DQG IHGHUDO HIIRUWV¤ 3'& KDV DJUHHG WR WDNH FRPSUHKHQVLYH DFW 92& HPLVVLRQV IURP LWV RLO DQG JDV RSHUDWLRQV¤ ¥ VDLG $VVRFLDWH $WWRUQH\ *HQHUDO 5DFKH 'HSDUWPHQW RI -XVWLFH◀ ≥:H DUH SURXG WKDW ZH ZHUH DEOH WR ZRUN VLGH E\ VLGH ZLWK EULQJ WKHVH IDFLOLWLHV LQWR FRPSOLDQFH ZLWK WKH ODZ◀ ¥

≥7KLV DJUHHPHQW ZLOO UHVXOW LQ FOHDQHU DLU LQ WKH 'HQYHU DUHD DQG VKRZV WKDW (3$ LV WKH ODZ LQ RUGHU WR HQVXUH SXEOLF KHDOWK LV SURWHFWHG¤ ¥ VDLG (3$ $GPLQLVWUDWRU 6FRWW H[HPSOLILHV WKH VWURQJ SDUWQHUVKLSV ZLWK VWDWHV WKDW DUH LQWHJUDO WR GHOLYHULQJ UHVXOWV FRPPXQLWLHV DQG ILQGLQJ VROXWLRQV WKDW EXLOG FRPSOLDQFH ZLWK WKH ODZ DQG SUHYHQW IXWXUH

7KH VHWWOHPHQW FRYHUV DSSUR[LPDWHO\ ├ ↑ ‼ 3'& WDQN EDWWHULHV DQG UHVROYHV FODLPV WKDW DGHTXDWHO\ GHVLJQ¤ VL]H¤ RSHUDWH DQG PDLQWDLQ YDSRU FRQWURO V\VWHPV RQ LWV FRQWUROOHG WDQNV¤ UHVXOWLQJ LQ 92& HPLVVLRQV◀ 92& DUH D NH\ FRPSRQHQW LQ WKH IRUPDWLRQ RI VPRJ R]RQH¤ D SROOXWDQW WKDW LUULWDWHV WKH OXQJV¤ H[DFHUEDWHV GLVHDVHV VXFK DV DVWKPD¤ DQ VXVFHSWLELOLW\ WR UHVSLUDWRU\ LOOQHVVHV¤ VXFK DV SQHXPRQLD DQG EURQFKLWLV◀ 7KH WDQN ED

WR WRGD\∂V VHWWOHPHQW DUH DOO ORFDWHG LQ DQ R]RQH QRQ┼ DWWDLQPHQW DUHD☼ PHDQLQJ WKDW WKH QDWLRQDO DLU TXDOLW\ VWDQGDUG WKDW (3$ VHW IRU WKLV SROOXWDQW◂

$V SDUW RI WKH VHWWOHPHQW☼ 3'& KDV DJUHHG WR HYDOXDWH WKH GHVLJQ DQG FDSDFLW\ RI LWV PRGLI\ WKRVH YDSRU FRQWURO V\VWHPV DV QHFHVVDU\ WR HQVXUH WKDW WKDW WKH\ DUH DGHTXDWHO VL]HG WR FROOHFW DQG FRQYH\ HPLVVLRQV WR D FRQWURO GHYLFH☼ LPSOHPHQW DQ HQKDQFHG LQVS PDLQWHQDQFH SURJUDP☼ DQG XQGHUWDNH SHULRGLF LQIUDUHG FDPHUD LQVSHFWLRQV WR LGHQWLI\ DQ\ WDNH SURPSW FRUUHFWLYH DFWLRQ WR DGGUHVV WKRVH HPLVVLRQV◂ :KHUH PRQLWRULQJ DQG UHFRUGNH UHFXUULQJ LVVXHV UHVXOWLQJ LQ HPLVVLRQV☼ 3'& ZLOO WDNH SURDFWLYH PHDVXUHV WR LGHQWLI\ V LVVXHV DQG SUHYHQW WKHLU UHFXUUHQFH◂

,Q DGGLWLRQ☼ 3'& ZLOO LPSOHPHQW WZR HQYLURQPHQWDO PLWLJDWLRQ SURMHFWV WR IXUWKHU UHGXFH SUHFXUVRUV IURP FHUWDLQ 3'& ZHOO SDGV LQ WKH QRQDWWDLQPHQW DUHD E\ DQ HVWLPDWHG FRPELQ \HDU◂ 7KHVH HIIRUWV DUH LQ DGGLWLRQ WR PHDVXUHV 3'& KDV DOUHDG\ WDNHQ WR UHGXFH HPLV SDGV☼ VXFK DV LPSOHPHQWLQJ WHFKQLTXHV DW DOO ORFDWLRQV HTXLSSHG ZLWK DXWRPDWLRQ FDSDELOL VWRUDJH WDQNV ZLWKRXW WKH QHHG WR RSHQ WKLHI KDWFKHV IRU VDPSOLQJ RU JDXJLQJ◂

7KH FRQVHQW GHFUHH☼ ORGJHG LQ WKH 'LVWULFW &RXUW RI &RORUDGR☼ LV VXEMHFW WR D ┬ ‼ ┼ DQG ILQDO FRXUW DSSURYDO◂ 7KH FRQVHQW GHFUHH ZLOO EH DYDLODEOH IRU YLHZLQJ DW KWWSV ↕ ↕ ZZZ◂ MXVWLFH◂ JRY↕ HQUG↕ FRQVHQW┼ GHFUHHV

0RUH RQ WKLV VHWWOHKWWSV ↕ ↕ ZZZ◂ HSD◂ JRY↕ HQIRUFHPHQW↕ SGF┼ HQHUJ\┼ LQF┼ FOHDQ┼ DLU┼ DFW┼ VHWW

$WWDFKPHQW(V)
'RZQORDG &RQVHQW 'HFUHH

7RSLF(V)
(QYLURQPHQW

&RPSRQHQW(V)
(QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ
2IILFH RI WKH $VVRFLDWH $WWRUQH\ *HQHUDO

3UHVV 5HOHDVH 1XPEHU
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8SGDWHG 1RYHPEHU ┴ ‼ ☼ ┴ ‼

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'HSDUWPHQW └ RI └ -XVWLFH

2IILFH └ RI └ 3XEOLF └ $IIDLUV

)25 └ ,00(',$7(└ 5(/($6(0RQGD\ └ 2FWREHU └ ┴ ┬

5HQHZDEOH └)XHO └ 7UDGHU └ 3OHDGV └ *XLOW\ └ WR └ &RQVSLUDF\

7KH └ RZQHU └ RI └ D └ FRPSDQ\ └ WKDW └ EX\V └ DQG └ VHOOV └ UHQHZDEOH └ IXHO └ DQG └ IXHO └ FUHGLWV └ SOHDGHG └ J
&RXUW └ IRU └ WKH └ 6RXWKHUQ └ 'LVWULFW └ RI └ 2KLR └ WR └ FRQVSLUDF\ └ IRU └ KLV └ UROH └ LQ └ D └ VFKHPH └ WKDW
LQ └ IUDXGXOHQW └ (3$ └ UHQHZDEOH └ IXHOV └ FUHGLWV └ DQG └ RYHU └ • ¶ ┴ └ PLOOLRQ └ LQ └ IUDXGXOHQW └ WD[└ I
SXUSRUWHG └ SURGXFWLRQ └ RI └ UHQHZDEOH └ IXHO◂

7KH └ SOHD └ HQWHUHG └ E\ └ WKH └ GHIHQGDQW └ *UHJRU\ └ 6FKQDEHO └ EHIRUH └ 8◂ 6◂ └ 0DJLVWUDWH └ -XGJH └ 1
DQQRXQFHG └ E\ └ $FWLQJ └ $VVLVWDQW └ $WWRUQH\ └ *HQHUDO └ -HIIUH\ └ +◂ └ :RRG └ IRU └ WKH └ -XVWLFH └ 'HSDUWP
DQG └ 1DWXUDO └ 5HVRXUFHV └ 'LYLVLRQ └ 8◂ 6◂ └ $WWRUQH\ └ %HQMDPLQ └ &◂ └ *ODVVPDQ └ IRU └ WKH └ 6RXWKHUQ
6SHFLDO └ $JHQW └ LQ └ &KDUJH └ 5\DQ └ /◂ └ .RUQHU └ RI └ WKH └ ,QWHUQDO └ 5HYHQXH └ 6HUYLFH └ ♂ ,56 └ &ULPLQ
$FWLQJ └ 6SHFLDO └ $JHQW └ LQ └ &KDUJH └ -RKQ └ .◂ └ *DXWKLHU └ RI └ WKH └ (QYLURQPHQWDO └ 3URWHFWLRQ └ $JHQ
HQIRUFHPHQW └ SURJUDP └ LQ └ 2KLR └ DQG └ WKH └ 6SHFLDO └ $JHQW └ LQ └ &KDUJH └ :◂ └ -D\ └ $EERWW └ RI └ WKH
,QYHVWLJDWLRQ∂V └ ,QGLDQDSROLV └ 'LYLVLRQ◂

≥7KH └ GHIHQGDQW └ KHOSHG └ RUFKHVWUDWH └ D └ PDVVLYH └ VFKHPH └ WR └ GHIUDXG └ WKH └ 8◂ 6◂ └ JRYHUQPHQW └
DQG └ KLV └ FRPSDQ\∂V └ FRPSHWLWRUV └ ¥ └ VDLG └ (3$ └ $GPLQLVWUDWRU └ 6FRWW └ 3UXLWW◂ └ ≥7KLV └ FDVH └ VKR
HQIRUFHPHQW └ SDUWQHUV └ DUH └ VHULRXV └ DERXW └ HQVXULQJ └ D └ OHYHO └ SOD\LQJ └ ILHOG └ IRU └ EXVLQHVVHV └ WK
SXQLVKLQJ └ WKRVH └ ZKR └ EUHDN └ WKH └ UXOHV └ LQ └ WKH └ QDPH └ RI └ SHUVRQDO └ JDLQ◂ ¥

≥7KH └ 'HSDUWPHQW └ RI └ -XVWLFH └ YLJRURXVO\ └ SURVHFXWHV └ WKRVH └ ZKR └ GHIUDXG └ WKH └ IHGHUDO └ JRYHUQPH
XQODZIXO └ 5)6 └ VFKHPHV └ OLNH └ WKH └ RQH └ DW └ LVVXH └ LQ └ WKLV └ FDVH ¥ └ VDLG └ $FWLQJ └ $VVLVWDQW └ $WW
≥:H └ DSSODXG └ WKH └ ZRUN └ RI └ WKH └ '2- └ DQG └ (3$ └ ODZ └ HQIRUFHPHQW └ WHDP └ WKDW └ VRXJKW └ DQG └ REWDLQ
FDVH◂ ¥

≥7KLV └ FDVH └ LV └ DQRWKHU └ H[DPSOH └ WKDW └ HQYLURQPHQWDO └ SURJUDPV └ DUH └ QRW └ LPPXQH └ IURP └ IUDXG ¥
*ODVVPDQ └ VDLG◂ └ ≥:H └ ZLOO └ FRQWLQXH └ WR └ FDWFK └ DQG └ KROG └ DFFRXQWDEOH └ WKRVH └ ZKR └ DWWHPSW └ WR
SURJUDPV └ RI └ DQ\ └ VRUW◂ ¥

≥7RGD\∂V └ FKDUJHV └ VHQG └ D └ VWURQJ └ PHVVDJH └ WKDW └ WKHUH └ DUH └ VHULRXV └ FRQVHTXHQFHV └ IRU └ DFWLYLW
HFRQRP\ └ DQG └ WD[SD\HUV ¥ └ VDLG └ 6SHFLDO └ $JHQW └ LQ └ &KDUJH └ $EERWW◂ └ ≥, └ FRPPHQG └ WKH └ H[FHOOH
EHWZHHQ └ WKH └ SURVHFXWRUV └ DJHQWV └ DQG └ RWKHU └ LQYHVWLJDWRUV └ ZKR └ ZRUNHG └ WLUHOHVVO\ └ WR └ XQFRYH
VFKHPH └ DQG └ H[SRVH └ WKH └ SHUSHWUDWRUV └ ZKR └ ZHUH └ PDQLSXODWLQJ └ WKH └ V\VWHP └ IRU └ WKHLU └ RZQ └ JDLQ

≥*UHJRU\ └ 6FKQDEHO └ SOHDGHG └ JXLOW\ └ WR └ SDUWLFLSDWLQJ └ LQ └ D └ FRQVSLUDF\ └ UHODWLYH └ WR └ D └ PDVVLY
FUHGLW └ VFKHPH └ IRU └ ZKLFK └ KH └ KDV └ DJUHHG └ WR └ SD\ └ RYHU └ • ¶ ┬ └ PLOOLRQ └ LQ └ UHVWLWXWLRQ └ WR └ W

LQ &KDUJH .RQHUJ ≥7KHVH WD[FUHGLWV ZHUH FUHDWHG LQ VXSSRUW RI WKH SURGXFWLRQ RI DQG IXHO PL[WXUHV WKH\ ZHUH QRW FUHDWHG WR EH D VOXVK IXQG IRU WKLHYHV DQG IUDXGVWHU

$FFRUGLQJ WR KLV SOHD 6FKDEHO RZQHU RI *5&)XHOV RI 2QHRQWD 1HZ <RUN HQJDJHG RWKHU FR FRQVSLUDWRUV WR IUDXGXOHQWO\ FODLP (3$ UHQHZDEOH IXHOV FUHGLWV DOVR NQRZQ DV WD[FUHGLWV RQ IXHO WKDW GLG QRW TXDOLI\ IRU WKH FUHGLWV RQ IXHO WKDW KDG DOUHDG\ DQG RQ IXHO WKDW ZDV H[SRUWHG RU RWKHUZLVH XVHG FRQWUDU\ WR (3$ DQG ,56 UHJXODWLRQV

6FKDEHO EURXJKW DQG VROG IXHO IURP VHYHUDO LQGLYLGXDOV ZKR KDYH DOUHDG\ SOHDGHG JXLOW\ VFKHPH LQFOXGLQJ

-)HG :LWPHU DQG *DU\ -XU\ IRUPHUO\ RI 7ULWRQ (QHUJ\ ZKR SOHDGHG JXLOW\ LQ WKH ,QGLDQD WR FRQVSLUDF\ IUDXG DQG IDOVH VWDWHPHQWV
- 0DOHN -DODO IRUPHUO\ RI 8QLW\ )XHOV ZKR SOHDGHG JXLOW\ LQ WKH 6RXWKHUQ 'LVWUL DQG REVWUXFWLRQ RI MXVWLFH DQG
- 'HDQ 'DQLHOV :LOOLDP %UDGOH\ 5LFN\ 6PLWK DQG %UHQGD 'DQLHOV RI 1HZ (QHUJ\ &KHPLFDO %LRIXHOV ZKR SOHDGHG JXLOW\ LQ WKH 6RXWKHUQ 'LVWULFW RI 2KLR WR FRQVS

7KLV FDVH LV EHLQJ SURVHFXWHG E\ $VVLVWDQW 8 6 $WWRUQH\ - 0LFKDHO 0DUDXV IRU WKH 2KLR DQG 7ULDO $WWRUQH\ $GDP &XOOPDQ DQG 6HQLRU 7ULDO $WWRUQH\ -HUHP\ .RU]HQLN RI WKH 1DWXUDO 5HVRXUFHV 'LYLVLRQ 7KH SURVHFXWLRQ LV WKH UHVXOW RI DQ LQYHVWLJDWLRQ E\ WKH)%,

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7RSLF V
(QYLURQPHQW

&RPSRQHQW V
(QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ

3UHVV 5HOHDVH 1XPEHU
¶→┼¶¶←├

8SGDWHG 2FWREHU ┬

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'HSDUWPHQW RI -XVWLFH

2IILFH RI 3XEOLF $IIDLUV

)25 ,00(',$7(5(/($6(:HGQHVGD\ 6HSWHPEHU

7\VRQ 3RXOWU\ 3OHDGV *XLOW\ WR &OHDQ :DWHU $FW 9LRODWLRQV LQ &RQQHFWLRQ ZLWK 'LVFKDUJH RI $FLGLF)HHG 6XSSOHPHQW

7\VRQ 3RXOWU\ ,QF ≥7\VRQ¥ SOHDGHG JXLOW\ WRGD\ LQ IHGHUDO FRXUW LQ 6SULQJILHOG FKDUJHV RI YLRODWLQJ WKH &OHDQ :DWHU $FW VWHPPLQJ IURP GLVFKDUJHV DW LWV VODXJKWHU DQG LQ 0RQHWW 0LVVRXUL

7\VRQ WKH QDWLRQ∂V ODUJHVW FKLFNHQ SURGXFHU LV KHDGTXDUWHUHG LQ 6SULQJGDOH $UNDQVD VXEVLGLDU\ RI 7\VRQ)RRGV ,QF ZKLFK RZQV DQG RSHUDWHV PXOWLSOH FRPSDQLHV LQ WKH IR VHUYLFH LQGXVWU\ 7KH FKDUJHV WR ZKLFK 7\VRQ SOHDGHG JXLOW\ DURVH RXW RI D VSLOO D LQJUHGLHQWV LQ LWV FKLFNHQ IHHG DW LWV IHHG PLOO LQ $XURUD 0LVVRXUL

2QH LQJUHGLHQW LQ 7\VRQ∂V IHHG ZDV D OLTXLG IRRG VXSSOHPHQW FDOOHG ≥$OLPHW¥ ZKLFK RQH $FFRUGLQJ WR WKH SOHD DJUHHPHQW ILOHG LQ IHGHUDO FRXUW LQ 0D\ WKH WKH $XURUD IHHG PLOO VSUDQJ D OHDN DQG WKH DFLGLF VXEVWDQFH IORZHG LQWR D VHFRQGDU\ 7\VRQ KLUHG D FRQWUDFWRU WR UHPRYH WKH $OLPHW DQG WUDQVSRUW LW WR 7\VRQ∂V 0RQHWW S ZDV XQORDGHG LQWR WKH LQ KRXVH WUHDWPHQW V\VWHP WKDW ZDV QRW GHVLJQHG WR WUHDW ZDWH FKDUDFWHULVWLFV 6RPH RI WKH $OLPHW PDGH LW LQWR WKH &LW\ RI 0RQHWW∂V PXQLFLSDO ZD ZKHUH LW NLOOHG EDFWHULD XVHG WR UHGXFH DPPRQLD LQ GLVFKDUJHV IURP WKH WUHDWPHQW SODQW DQG UHVXOWLQJ LQ WKH GHDWK RI DSSUR[LPDWHO\ ILVK

8QGHU WKH WHUPV RI WKH SOHD DJUHHPHQW 7\VRQ ZLOO SD\ D PLOOLRQ FULPLQDO ILQH D SUREDWLRQ ,Q DGGLWLRQ 7\VRQ ZLOO SD\ WR PDLQWDLQ DQG UHVWRUH ZDWH IRFXV RQ &OHDU &UHHN DQG WKH DGMRLQLQJ ZDWHUZD\V 7\VRQ ZLOO DOVR LPSOHPHQW HQYLURQP SURJUDPV LQFOXGLQJ KLULQJ DQ LQGHSHQGHQW WKLUG SDUW\ DXGLWRU WR H[DPLQH DOO 7\VRQ S WKURXJKRXW WKH FRXQWU\ WR DVVHVV WKHLU FRPSOLDQFH ZLWK WKH &OHDQ :DWHU $FW DQG KD]DUGR FRQGXFWLQJ VSHFLDOL]HG HQYLURQPHQWDO WUDLQLQJ DW LWV SRXOWU\ SURFHVVLQJ SODQWV KDWFKHULH UHQGHULQJ SODQWV DQG ZDVWH ZDWHU WUHDWPHQW SODQWV DQG LPSOHPHQWLQJ LPSURYHG SROLFLHV DGGUHVV WKH FLUFXPVWDQFHV WKDW JDYH ULVH WR WKHVH YLRODWLRQV

≥2XU 'LYLVLRQ LV KRSHIXO WKDW WKH RXWFRPH RI WKLV FDVH ZLOO KHOS GHWHU IXWXUH YLRODW DQG NHHS RXU ZDWHU VXSSO\ DQG PDULQH OLIH IUHH IURP SROOXWLRQ ¥ VDLG $FWLQJ $VVLVWDQ -HIIUH\ + :RRG RI WKH (QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ ≥7RGD\∂V DJUHHPHQ HQYLURQPHQWDO KDUP FDXVHG E\ WKH GHIHQGDQW∂V DFWLRQV ZKLOH DOVR KHOSLQJ WR HQVXUH WKDW SUREOHPV GR QRW KDSSHQ DJDLQ ¥

≥7\VRQ∂V DGPLWWHG FULPLQDO FRQGXFW FDXVHG VLJQLILFDQW HQYLURQPHQWDO GDPDJH LQFOXGLQJ D NLOO ¥ VDLG $FWLQJ 8 6 $WWRUQH\ 7RP /DUVRQ RI WKH :HVWHUQ 'LVWULFW RI 0LVVRXUL

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only holds Tyson accountable for its actions in Missouri, but requires the company to compliance with the Clean Water Act at its poultry facilities throughout the United St

"Ensuring agricultural operations dispose of their waste in a lawful way is critical y local communities and clean water," said Larry Starfield, acting Assistant Administrat Enforcement and Compliance Assurance. "The plea agreement in this case will improve T compliance with important clean water and hazardous waste laws and help prevent future

Acting Assistant Attorney General Wood and Acting U.S. Attorney Larson thanked the U. Protection Agency's Criminal Investigation Division for its work in this investigation. prosecuted by the U.S. Attorney's Office for the Western District of Missouri and th Section of the Justice Department's Environment and Natural Resources Division.

Component(s):
Environment and Natural Resources Division

Press Release Number:
[illegible]

Updated September [illegible]

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'HSDUWPHQW RI -XVWLFH

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9RONVZDJHQ $* 3OHDGV *XLOW\ LQ &RQQHFWLRQ ZLWK &RQVSLUDF\ WR &KHDW 8◄ 6◄ (PLVVLRQV 7HVWV

9RONVZDJHQ $* ♂ 9:□ SOHDGHG JXLOW\ LQ IHGHUDO FRXUW LQ 'HWURLW WRGD\ WR WKUHH IHORQ\ FRQVSLUDF\ WR GHIUDXG WKH 8QLWHG 6WDWHV☼ HQJDJH LQ ZLUH IUDXG☼ DQG YLRODWH WKH &OHDQ RI MXVWLFH DQG ♂ ┬ □ LPSRUWDWLRQ RI PHUFKDQGLVH E\ PHDQV RI IDOVH VWDWHPHQWV◄ $V DJUHHG WR SD\ D • ┴ ◄ ← ELOOLRQ SHQDOW\ DV D UHVXOW RI WKH FRPSDQ\∂V GHFDGH┼ ORQJ VF FRQWDLQLQJ VRIWZDUH GHVLJQHG WR FKHDW RQ 8◄ 6◄ HPLVVLRQV WHVWV◄ ,Q -DQXDU\ ┴ ‼ ¶ → ☼ JXLOW\ WR UHVROYH WKHVH FULPLQDO FKDUJHV◄

$FWLQJ $VVLVWDQW $WWRUQH\ *HQHUDO .HQQHWK $◄ %ODQFR RI WKH -XVWLFH 'HSDUWPHQW∂V &ULPLQ $WWRUQH\ %DUEDUD 0F4XDGH RI WKH (DVWHUQ 'LVWULFW RI 0LFKLJDQ☼ 'HSXW\ $VVLVWDQW $WWRUQH\ :LOOLDPV RI WKH -XVWLFH 'HSDUWPHQW∂V (QYLURQPHQW DQG 1DWXUDO 5HVRXUFHV 'LYLVLRQ☼ 6SHFLD -HIIUH\ 0DUWLQH] RI WKH &KLFDJR $UHD 2IILFH RI WKH (QYLURQPHQWDO 3URWHFWLRQ $JHQF\∂V & 'LYLVLRQ ♂ (3$┼ &,'□ DQG 6SHFLDO $JHQW LQ &KDUJH 'DYLG *HOLRV RI WKH)%, 'HWURLW)LHO DQQRXQFHPHQW◄

9: SOHDGHG JXLOW\ EHIRUH 8◄ 6◄ 'LVWULFW -XGJH 6HDQ)◄ &R[RI WKH (DVWHUQ 'LVWULFW R 9: SOHDGHG JXLOW\☼ ILUVW☼ WR SDUWLFLSDWLQJ LQ D FRQVSLUDF\ WR GHIUDXG WKH 8QLWHG 6WD FXVWRPHUV DQG WR YLRODWH WKH &OHDQ $LU $FW E\ O\LQJ DQG PLVOHDGLQJ WKH (3$ DQG 8◄ 6◄ ZKHWKHU FHUWDLQ 9:☼ $XGL DQG 3RUVFKH EUDQGHG GLHVHO YHKLFOHV FRPSOLHG ZLWK 8◄ 6◄ HPLV XVLQJ FKHDWLQJ VRIWZDUH WR FLUFXPYHQW WKH 8◄ 6◄ WHVWLQJ SURFHVV DQG FRQFHDOLQJ PDWHULDO FKHDWLQJ IURP 8◄ 6◄ UHJXODWRUV◄ 6HFRQG☼ 9: SOHDGHG JXLOW\ WR REVWUXFWLRQ RI MXVWLFH GRFXPHQWV UHODWHG WR WKH VFKHPH◄ $QG WKLUG☼ 9: SOHDGHG JXLOW\ WR LPSRUWLQJ WKHVH FD 6WDWHV E\ PHDQV RI IDOVH VWDWHPHQWV DERXW WKH YHKLFOHV∂ FRPSOLDQFH ZLWK HPLVVLRQV OLPLW 9:∂V SOHD☼ -XGJH &R[VFKHGXOHG WKH FRPSDQ\∂V VHQWHQFLQJ IRU $SULO ┴ ¶ ☼ ┴ ‼ ¶ → ◄

7KH)%, DQG (3$┼ &,' LQYHVWLJDWHG WKH FDVH◄ 7KLV FDVH LV EHLQJ SURVHFXWHG E\ PHPEHU RI -XVWLFH∂V &ULPLQDO 'LYLVLRQ☼)UDXG 6HFWLRQ☼ LQFOXGLQJ &KLHI RI WKH 6HFXULWLHV DQ %HQMDPLQ '◄ 6LQJHU☼ DV ZHOO DV 7ULDO $WWRUQH\V 'DYLG)XKU☼ $OLVRQ $QGHUVRQ☼ &KULVWRS :LQWHUV◄ $OVR SURVHFXWLQJ WKH FDVH DUH PHPEHUV RI WKH 'HSDUWPHQW RI -XVWLFH∂V (QYLU 5HVRXUFHV 'LYLVLRQ☼ (QYLURQPHQWDO &ULPHV 6HFWLRQ☼ LQFOXGLQJ 6HQLRU 7ULDO $WWRUQH\ -HQ %ODFNZHOO◄ $GGLWLRQDOO\☼ WKH FDVH LV EHLQJ SURVHFXWHG E\ PHPEHUV RI WKH 8◄ 6◄ $WWR (DVWHUQ 'LVWULFW RI 0LFKLJDQ☼ LQFOXGLQJ &ULPLQDO 'LYLVLRQ &KLHI 0DUN &KXWNRZ☼ (FRQRPLF -RKQ .◄ 1HDO DQG $VVLVWDQW 8◄ 6◄ $WWRUQH\ 7LPRWK\ -◄ :\VH◄ 7KH -XVWLFH 'HSDUWPHQ ,QWHUQDWLRQDO $IIDLUV DOVR DVVLVWHG LQ WKH FDVH◄ 7KH -XVWLFH 'HSDUWPHQW H[WHQGV LWV WKH 3XEOLF 3URVHFXWRU LQ %UDXQVFKZHLJ☼ *HUPDQ\◄

7RSLF♂ V□ └
(QYLURQPHQW
6WRS)UDXG

&RPSRQHQW♂ V□ └
&ULPLQDO└ 'LYLVLRQ
&ULPLQDO└ ┼ └ &ULPLQDO└)UDXG└ 6HFWLRQ
(QYLURQPHQW└ DQG└ 1DWXUDO└ 5HVRXUFHV└ 'LYLVLRQ
86$2└ ┼ └ 0LFKLJDQ☼ └ (DVWHUQ

3UHVV└ 5HOHDVH└ 1XPEHU └
¶ → ┼ ┴ ├ ┬

8SGDWHG└ 0DUFK└ ¶ ‼ ☼ └ ┴ !

To: Ostrander, David[Ostrander.David@epa.gov]; Benevento, Douglas[benevento.douglas@epa.gov]; Traylor, Patrick[traylor.patrick@epa.gov]; Davis, Patrick[davis.patrick@epa.gov]; Smidinger, Betsy[Smidinger.Betsy@epa.gov]
Cc: Dhieux, Joyel[Dhieux.Joyel@epa.gov]
From: Bodine, Susan
Sent: Mon 11/27/2017 9:02:21 PM
Subject: RE: November 26 - Update on TransCanada "Ludden +17" Spill

Thanks!
One more question. The incident briefing says there is sampling down to 8 feet and a perched water aquifer at 8 feet, but does not say whether the sampling has shown whether the oil reached the aquifer. I assume it has not. Is that correct?

Susan

-----Original Message-----
From: Ostrander, David
Sent: Monday, November 27, 2017 3:50 PM
To: Bodine, Susan <bodine.susan@epa.gov>; Benevento, Douglas <benevento.douglas@epa.gov>; Traylor, Patrick <traylor.patrick@epa.gov>; Davis, Patrick <davis.patrick@epa.gov>; Smidinger, Betsy <Smidinger.Betsy@epa.gov>
Cc: Dhieux, Joyel <Dhieux.Joyel@epa.gov>
Subject: FW: November 26 - Update on TransCanada "Ludden +17" Spill

Susan,

Transcanada is removing free oil and soils at this time. The soils are being staged for disposal on a lined and bermed pad in accordance with state regulations. They will segregate the more saturated soils (i.e. the area around the rupture) from the less impacted soils (i.e. area lightly sprayed). Soils (and most waste streams) will be sampled and characterized prior to disposal. They are still a few weeks from disposal, thus no soil samples for disposal have been collected at this point. Transcanada intends to test the soils for hazardous waste characteristics and manage them appropriately as solid or hazardous wastes. According to Transcanada, these wastes are not exempt E&P wastes.

Thanks, and let us know if you have any other questions.

> From: Bodine, Susan
> Sent: Monday, November 27, 2017 8:09 AM
> To: Ostrander, David <Ostrander.David@epa.gov>
> Cc: Benevento, Douglas <benevento.douglas@epa.gov>; Traylor, Patrick
> <traylor.patrick@epa.gov>
> Subject: FW: November 26 - Update on TransCanada "Ludden +17" Spill
>
> See question below – got an out of office reply from Betsy.
>
>
> From: Bodine, Susan
> Sent: Monday, November 27, 2017 10:03 AM
> To: Smidinger, Betsy
> <Smidinger.Betsy@epa.gov<mailto:Smidinger.Betsy@epa.gov>>
> Cc: Benevento, Douglas

> <benevento.douglas@epa.gov<mailto:benevento.douglas@epa.gov>>; Patrick
> Traylor (traylor.patrick@epa.gov<mailto:traylor.patrick@epa.gov>)
> <traylor.patrick@epa.gov<mailto:traylor.patrick@epa.gov>>
> Subject: FW: November 26 - Update on TransCanada "Ludden +17" Spill
>
> Betsy,
>

Ex. 5 - Deliberative Process

>
> Thanks,
>
> Susan
>
>
> From: Traylor, Patrick
> Sent: Monday, November 27, 2017 7:54 AM
> To: Jackson, Ryan <jackson.ryan@epa.gov<mailto:jackson.ryan@epa.gov>>;
> Bodine, Susan <bodine.susan@epa.gov<mailto:bodine.susan@epa.gov>>;
> Bowman, Liz <Bowman.Liz@epa.gov<mailto:Bowman.Liz@epa.gov>>; Ferguson,
> Lincoln <ferguson.lincoln@epa.gov<mailto:ferguson.lincoln@epa.gov>>
> Subject: Fwd: November 26 - Update on TransCanada "Ludden +17" Spill
>
> FYSA
> Patrick Traylor
> Deputy Assistant Administrator
> Office of Enforcement and Compliance Assurance U.S. Environmental
> Protection Agency
> (202) 564-5238 (office)
> (202) 809-8796 (cell)
>
> Begin forwarded message:
> From: "Smidinger, Betsy"
> <Smidinger.Betsy@epa.gov<mailto:Smidinger.Betsy@epa.gov>>
> To: "Benevento, Douglas"
> <benevento.douglas@epa.gov<mailto:benevento.douglas@epa.gov>>,
> "Thomas, Deb" <thomas.debrah@epa.gov<mailto:thomas.debrah@epa.gov>>,
> "Davis, Patrick"
> <davis.patrick@epa.gov<mailto:davis.patrick@epa.gov>>, "Traylor,
> Patrick" <traylor.patrick@epa.gov<mailto:traylor.patrick@epa.gov>>
> Cc: "Mutter, Andrew"
> <mutter.andrew@epa.gov<mailto:mutter.andrew@epa.gov>>, "Ostrander,
> David" <Ostrander.David@epa.gov<mailto:Ostrander.David@epa.gov>>,
> "Williams, Laura"
> <williams.laura@epa.gov<mailto:williams.laura@epa.gov>>, "Dhieux,
> Joyel" <Dhieux.Joyel@epa.gov<mailto:Dhieux.Joyel@epa.gov>>, "Griswold,
> Hays" <Griswold.Hays@epa.gov<mailto:Griswold.Hays@epa.gov>>
> Subject: Fwd: November 26 - Update on TransCanada "Ludden +17" Spill
> Hi All - Here is Joyel's update for today.
>
> Sent from my iPhone
>
> Betsy Smidinger
> ARA, Ecosystems Protection and Remediation Region 8, US EPA Denver, CO
> (303) 312-6231 (o)

> (303) 335-7627 (c)
>
> Begin forwarded message:
> From: "Dhieux, Joyel"
> <Dhieux.Joyel@epa.gov<mailto:Dhieux.Joyel@epa.gov>>
> To: "Smidinger, Betsy"
> <Smidinger.Betsy@epa.gov<mailto:Smidinger.Betsy@epa.gov>>, "Ostrander,
> David" <Ostrander.David@epa.gov<mailto:Ostrander.David@epa.gov>>,
> "Williams, Laura"
> <williams.laura@epa.gov<mailto:williams.laura@epa.gov>>, "Griswold,
> Hays" <Griswold.Hays@epa.gov<mailto:Griswold.Hays@epa.gov>>
> Subject: November 26 - Update on TransCanada "Ludden +17" Spill
>
> Hi All,
>
>
>
> I've attached the updated Incident Briefing for the TransCanada "Ludden +17" Spill. The pipeline was successfully drained last night and will removed tonight. The damaged section of pipeline will be sent to PHMSA for analysis.
>
>
>
> If you have any questions, please let me know. Tomorrow is my last planned day on-site.
>
>
>
> Joyel
>
>
>
> .....
>
> Joyel Dhieux
>
> Federal On-Scene Coordinator
>
> U.S. EPA Region 8
>
> Tel: 303-312-6647
>
> Cell: 720-441-9961
> <Incident Briefing 11.26.17.docx>
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From: Bodine, Susan
Sent: Fri 10/6/2017 9:22:12 PM
Subject: Following up
GAO on baseline.pdf
EPA-HQ-OW-2011-0880-20877 EPA JD Review Process.pdf
EPW comment letter.pdf
NRDC comments.pdf
33cfr323.pdf
33cfr328.pdf
33cfr329.pdf

Sarah,

We had a good conversation and recommend getting together again early next week.

Brittany, attached are (1) a 2000 GAO report that Ex. 5 - Deliberative Process Ex. 5 - Deliberative Process (2) the analysis of JDs that was put in the WOTUS rule docket in Nov 2015 Ex. 5 - Deliberative Process Ex. 5 - Deliberative Process and (3) the Senate comments that Ex. 5 - Deliberative Process

All, for your convenience attached are the NRDC comments as well as PDFs of the Corps' section 10 regulations, the Corps' permit regulations and the Corps' 404 regulations – Pre 2015 rule.

Have a good weekend all

Susan

33 CFR Part 323
Permits for Discharges of Dredged or Fill Material Into Waters of the United States

AUTHORITY: 33 U.S.C. 1344.

Section 323.1 - General.

This regulation prescribes, in addition to the general policies of 33 CFR Part 320 and procedures of 33 CFR Part 325, those special policies, practices, and procedures to be followed by the Corps of Engineers in connection with the review of applications for DA permits to authorize the discharge of dredged or fill material into waters of the United States pursuant to section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) (hereinafter referred to as section 404). (See 33 CFR 320.2(g).) Certain discharges of dredged or fill material into waters of the United States are also regulated under other authorities of the Department of the Army. These include dams and dikes in navigable waters of the United States pursuant to section 9 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401; see 33 CFR Part 321) and certain structures or work in or affecting navigable waters of the United States pursuant to section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403; see 33 CFR Part 322). A DA permit will also be required under these additional authorities if they are applicable to activities involving discharges of dredged or fill material into waters of the United States. Applicants for DA permits under this part should refer to the other cited authorities and implementing regulations for these additional permit requirements to determine whether they also are applicable to their proposed activities.

Section 323.2 Definitions.

For the purpose of this part, the following terms are defined:

(a) The term **"waters of the United States"** and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR Part 328.

(b) The term **"lake"** means a standing body of open water that occurs in a natural depression fed by one or more streams from which a stream may flow, that occurs due to the widening or natural blockage or cutoff of a river or stream, or that occurs in an isolated natural depression that is not a part of a surface river or stream. The term also includes a standing body of open water created by artificially blocking or restricting the flow of a river, stream, or tidal area. As used in this regulation, the term does not include artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water for such purposes as stock watering, irrigation, settling basins, cooling, or rice growing.

(c) The term **"dredged material"** means material that is excavated or dredged from waters of the United States.

(d)

(1) Except as provided below in paragraph (d)(3), the term *discharge of dredged material* means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States. The term includes, but is not limited to, the following:

(i) the addition of dredged material to a specified discharge site located in waters of the United States;
(ii) the runoff or overflow from a contained land or water disposal area; and
(iii) any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into waters of the United States which is incidental to any activity, including mechanized land-clearing, ditching, channelization, or other excavation.

(2)

(i) The Corps and EPA regard the use of mechanized earth-moving equipment to conduct land-clearing, ditching, channelization, in-stream mining or other earth-moving activity in the United States as resulting in a discharge of dredged material unless project-specific evidence shows that the activity results in only incidental fallback. This paragraph (i) does not and is not intended to shift any burden in any administrative or judicial proceeding under the CWA.
(ii) *Incidental fallback* is the redeposit of small volumes of dredged material that is incidental to excavation activity in waters of the United States when such material falls back to substantially the same place as the initial removal. Examples of incidental fallback include soil that is disturbed when dirt is shoveled and the back-spill that comes off a bucket when such small volume of soil or dirt falls into substantially the same place from which it was initially removed.

(3) The term *discharge of dredged material* does not include the following:

(i) discharges of pollutants into waters of the United States resulting from the onshore subsequent processing of dredged material that is extracted for any commercial use (other than fill). These discharges are subject to section 402 of the Clean Water Act even though the extraction and deposit of such material may require a permit from the Corps or applicable state Section 404 program.
(ii) activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chain-sawing) where the activity neither substantially disturbs the root system, nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
(iii)incidental fallback

(4) Section 404 authorization is not required for the following:

(i) any incidental addition, including redeposit, of dredged material associated with any activity that does not have or would not have the effect of destroying or degrading an area of waters of the United States as defined in paragraphs (d)(5) and (d)(6) of this section; however, this exception does not apply to any person preparing to undertake mechanized land-clearing, ditching, channelization and other excavation activity in a water of the United States, which would result in a redeposit of dredged material, unless the person demonstrates to the satisfaction of the Corps, or EPA as appropriate, prior to commencing the activity involving the discharge, that the activity would not have the effect of destroying or degrading any area of waters of the United States, as defined in paragraphs (d)(5) and (d)(6) of this section. The person proposing to undertake mechanized land-clearing, ditching, channelization or other excavation activity bears the burden of demonstrating that such activity would not destroy or degrade any area of waters of the United States.
(ii) incidental movement of dredged material occurring during normal dredging operations, as defined as dredging for navigation in *navigable waters of the United States*, as that term is defined in part 329 of this chapter, with proper authorization from the Congress and/or the Corps pursuant to part 322 of this Chapter; however, this exception is not applicable to dredging activities in wetlands, as that term is defined at section 328.3 of this Chapter.
(iii) certain discharges, such as those associated with normal farming, silvicuture, and ranching activities, are not prohibited by otherwise subject to regulation under Section 404. See 33 CFR 323.4 for discharges that do not require permits.

(5) For purposes of this section, an activity associated with a discharge of dredged material destroys an area of waters of the United States if it alters the area in such a way that it would no longer be a water of the United States.

[**Note:** Unauthorized discharges into waters of the United States do not eliminate Clean Water Act jurisdiction, even where such unauthorized discharges have the effect of destroying waters of the United States.]

(6) For purposes of this section, an activity associated with a discharge of dredged material degrades an area of waters of the United States if it has more than a *de minimis* (i.e., inconsequential) effect on the area by causing an identifiable individual or cumulative adverse effect on any aquatic function.

(e) (1) Except as specified in paragraph (e)(3) of this section, the term fill material means material placed in waters of the United States where the material has the effect of:
(i) Replacing any portion of a water of the United States with dry land; or
(ii) Changing the bottom elevation of any portion of a water of the United States.
(2) Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.
(3) The term fill material does not include trash or garbage.

(f) The term **"discharge of fill material"** means the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, or other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and sub-aqueous utility lines; placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials; and artificial reefs. The term does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products (See Section 323.4 for the definition of these terms). See Section 323.3(c) concerning the regulation of the placement of pilings in waters of the United States.

(g) The term **"individual permit"** means a Department of the Army authorization that is issued following a case-by-case evaluation of a specific project involving the proposed discharge(s) in accordance with the procedures of this part and 33 CFR Part 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR Part 320.

(h) The term **"general permit"** means a Department of the Army authorization that is issued on a nationwide or regional basis for a category or categories of activities when:

(1) Those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts; or

(2) The general permit would result in avoiding unnecessary duplication of regulatory control exercised by another Federal, state, or local agency provided it has been determined that the environmental consequences of the action are individually and cumulatively minimal. (See 33 CFR 325.2(e) and 33 CFR Part 330.)

Section 323.3 - Discharge requiring permits.

(a) General. Except as provided in Section 323.4 of this Part, DA permits will be required for the discharge of dredged or fill material into waters of the United States. Certain discharges specified in 33 CFR Part 330 are permitted by that regulation ("nationwide permits"). Other discharges may be authorized by district or division engineers on a regional basis ("regional permits"). If a discharge of dredged or fill material is not exempted by Section 323.4 of this Part or permitted by 33 CFR Part 330, an individual or regional section 404 permit will be required for the discharge of dredged or fill material into waters of the United States.

(b) Activities of Federal agencies. Discharges of dredged or fill material into waters of the United States done by or on behalf of any Federal agency, other than the Corps of Engineers (see 33

CFR Part 209.145), are subject to the authorization procedures of these regulations. Agreement for construction or engineering services performed for other agencies by the Corps of Engineers does not constitute authorization under the regulations. Division and district engineers will therefore advise Federal agencies and instrumentalities accordingly and cooperate to the fullest extent in expediting the processing of their applications.

(c) Pilings

(1) Placement of pilings in waters of the United States constitutes a discharge of fill material and requires a Section 404 permit when such placement has or would have the effect of a discharge of fill material. Examples of such activities that have the effect of a discharge of fill material include, but are not limited to, the following: Projects where the pilings are so closely spaced that sedimentation rates would be increased; projects in which the pilings themselves effectively would replace the bottom of a water-body; projects involving the placement of pilings that would reduce the reach or impair the flow or circulation of waters of the United States; and projects involving the placement of pilings which would result in the adverse alteration or elimination of aquatic functions.

(2) Placement of pilings in waters of the United States that does not have or would not have the effect of a discharge of fill material shall not require a Section 404 permit. Placement of pilings for linear projects, such as bridges, elevated walkways, and power line structures, generally does not have the effect of a discharge of fill material. Furthermore, placement of pilings in waters of the United States for piers, wharves, and an individual house on stilts generally does not have the effect of a discharge of fill material. All pilings, however, placed in the *navigable waters of the United States*, as that term is defined in part 329 of this chapter, require authorization under section 10 of the Rivers and Harbors Act of 1899 (see part 322 of this chapter).

Section 323.4 - Discharges not requiring permits.

(a) General. Except as specified in paragraphs (b) and (c) of this section, any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under section 404:

(1)

(i) Normal farming, silviculture and ranching activities such as plowing, seeding, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices, as defined in paragraph (a)(1)(iii) of this section.
(ii) To fall under this exemption, the activities specified in paragraph (a)(1)(i) of this section must be part of an established (i.e., on-going) farming, silviculture, or ranching operation and must be in accordance with definitions in Section 323.4(a)(1)(iii). Activities on areas lying fallow as part of a conventional rotational

cycle, are part of an established operation. Activities which bring an area into farming, silviculture, or ranching use are not part of an established operation. An operation ceases to be established when the area on which it was conducted has been converted to another use or has lain idle so long that modifications to the hydrological regime are necessary to resume operations. If an activity takes place outside the waters of the United States, or if it does not involve a discharge, it does not need a section 404 permit, whether or not it is part of an established farming, silviculture, or ranching operation.

(iii)

(A) Cultivating means physical methods of soil treatment employed within established farming, ranching and silviculture lands on farm, ranch, or forest crops to aid and improve their growth, quality or yield.

(B) Harvesting means physical measures employed directly upon farm, forest, or ranch crops within established agricultural and silvicultural lands to bring about their removal from farm, forest, or ranch land, but does not include the construction of farm, forest, or ranch roads.

(C)

(1) Minor Drainage means:

(i) The discharge of dredged or fill material incidental to connecting upland drainage facilities to waters of the United States, adequate to effect the removal of excess soil moisture from upland croplands. (Construction and maintenance of upland (dry land) facilities, such as ditching and tiling, incidental to the planting, cultivating, protecting, or harvesting of crops, involve no discharge of dredged or fill material into waters of the United States, and as such never require a section 404 permit.);

(ii) The discharge of dredged or fill material for the purpose of installing ditching or other such water control facilities incidental to planting, cultivating, protecting, or harvesting of rice, cranberries or other wetland crop species, where these activities and the discharge occur in waters of the United States which are in established use for such agricultural and silvicultural wetland crop production;

(iii) The discharge of dredged or fill material for the purpose of manipulating the water levels of, or regulating the flow or distribution of water within, existing impoundments which have been constructed in accordance with applicable requirements of CWA, and which are in established use for the production of rice, cranberries, or other wetland crop species. (The provisions of paragraphs (a)(1)(iii)(C)(1) (ii) and (iii) of this section apply to areas that are in established use exclusively for wetland crop production as well as areas in

established use for conventional wetland/non-wetland crop rotation (e.g., the rotations of rice and soybeans) where such rotation results in the cyclical or intermittent temporary dewatering of such areas.)

(iv) The discharges of dredged or fill material incidental to the emergency removal of sandbars, gravel bars, or other similar blockages which are formed during flood flows or other events, where such blockages close or constrict previously existing drainage-ways and, if not promptly removed, would result in damage to or loss of existing crops or would impair or prevent the plowing, seeding, harvesting or cultivating of crops on land in established use for crop production. Such removal does not include enlarging or extending the dimensions of, or changing the bottom elevations of, the affected drainage-way as it existed prior to the formation of the blockage. Removal must be accomplished within one year of discovery of such blockages in order to be eligible for exemption.

(2) Minor drainage in waters of the U.S. is limited to drainage within areas that are part of an established farming or silviculture operation. It does not include drainage associated with the immediate or gradual conversion of a wetland to a non-wetland (e.g., wetland species to upland species not typically adapted to life in saturated soil conditions), or conversion from one wetland use to another (for example, silviculture to farming). In addition, minor drainage does not include the construction of any canal, ditch, dike or other waterway or structure which drains or otherwise significantly modifies a stream, lake, swamp, bog or any other wetland or aquatic area constituting waters of the United States. Any discharge of dredged or fill material into the waters of the United States incidental to the construction of any such structure or waterway requires a permit.

(D) Plowing means all forms of primary tillage, including moldboard, chisel, or wide-blade plowing, discing, harrowing and similar physical means utilized on farm, forest or ranch land for the breaking up, cutting, turning over, or stirring of soil to prepare it for the planting of crops. The term does not include the redistribution of soil, rock, sand, or other surficial materials in a manner which changes any area of the waters of the United States to dry land. For example, the redistribution of surface materials by blading, grading, or other means to fill in wetland areas is not plowing. Rock crushing activities which result in the loss of natural drainage characteristics, the reduction of water storage and recharge capabilities, or the overburden of natural water filtration capacities do not constitute plowing. Plowing as described above will never involve a discharge of dredged or fill material.

(E) Seeding means the sowing of seed and placement of seedlings to produce farm, ranch, or forest crops and includes the placement of soil beds for seeds or seedlings on established farm and forest lands.

(2) Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design. Emergency reconstruction must occur within a reasonable period of time after damage occurs in order to qualify for this exemption.

(3) Construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption. **(4)** Construction of temporary sedimentation basins on a construction site which does not include placement of fill material into waters of the U.S. The term "construction site" refers to any site involving the erection of buildings, roads, and other discrete structures and the installation of support facilities necessary for construction and utilization of such structures. The term also includes any other land areas which involve land-disturbing excavation activities, including quarrying or other mining activities, where an increase in the runoff of sediment is controlled through the use of temporary sedimentation basins. **(5)** Any activity with respect to which a state has an approved program under section 208(b)(4) of the CWA which meets the requirements of sections 208(b)(4)(B) and (C). **(6)** Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained in accordance with best management practices (BMPs) to assure that flow and circulation patterns and chemical and biological characteristics of waters of the United States are not impaired, that the reach of the waters of the United States is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized. These BMPs which must be applied to satisfy this provision shall include those detailed BMPs described in the state's approved program description pursuant to the requirements of 40 CFR Part 233.22(i), and shall also include the following baseline provisions:

(i) Permanent roads (for farming or forestry activities), temporary access roads (for mining, forestry, or farm purposes) and skid trails (for logging) in waters of the U.S. shall be held to the minimum feasible number, width, and total length consistent with the purpose of specific farming, silvicultural or mining operations, and local topographic and climatic conditions;
(ii) All roads, temporary or permanent, shall be located sufficiently far from streams or other water bodies (except for portions of such roads which must cross water bodies) to minimize discharges of dredged or fill material into waters of the U.S.;
(iii) The road fill shall be bridged, culverted, or otherwise designed to prevent the restriction of expected flood flows;
(iv) The fill shall be properly stabilized and maintained during and following construction to prevent erosion;

(v) Discharges of dredged or fill material into waters of the United States to construct a road fill shall be made in a manner that minimizes the encroachment of trucks, tractors, bulldozers, or other heavy equipment within waters of the United States (including adjacent wetlands) that lie outside the lateral boundaries of the fill itself;
(vi) In designing, constructing, and maintaining roads, vegetative disturbance in the waters of the U.S. shall be kept to a minimum;
(vii) The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body;
(viii) Borrow material shall be taken from upland sources whenever feasible;
(ix) The discharge shall not take, or jeopardize the continued existence of, a threatened or endangered species as defined under the Endangered Species Act, or adversely modify or destroy the critical habitat of such species;
(x) Discharges into breeding and nesting areas for migratory waterfowl, spawning areas, and wetlands shall be avoided if practical alternatives exist;
(xi) The discharge shall not be located in the proximity of a public water supply intake;
(xii) The discharge shall not occur in areas of concentrated shellfish production;
(xiii) The discharge shall not occur in a component of the National Wild and Scenic River System;
(xiv) The discharge of material shall consist of suitable material free from toxic pollutants in toxic amounts; and
(xv) All temporary fills shall be removed in their entirety and the area restored to its original elevation.

(b) If any discharge of dredged or fill material resulting from the activities listed in paragraphs (a)(1)-(6) of this section contains any toxic pollutant listed under section 307 of the CWA such discharge shall be subject to any applicable toxic effluent standard or prohibition, and shall require a Section 404 permit.

(c) Any discharge of dredged or fill material into waters of the United States incidental to any of the activities identified in paragraphs (a) (1)-(6) of this section must have a permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States nay be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration. For example, a permit will be required for the conversion of a cypress swamp to some other use or the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches or other works or structures used to effect such conversion. A conversion of a Section 404 wetland to a non-wetland is a change in use of an area of waters of the United States. A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States.

(d) Federal projects which qualify under the criteria contained in section 404(r) of the CWA are exempt from section 404 permit requirements, but may be subject to other state or Federal requirements.

Section 323.5 - Program transfer to states.

Section 404(h) of the CWA allows the Administrator of the Environmental Protection Agency (EPA) to transfer administration of the section 404 permit program for discharges into certain waters of the United States to qualified states. (The program cannot be transferred for those waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to the high tide line, including wetlands adjacent thereto). See 40 CFR Parts 233 and 124 for procedural regulations for transferring Section 404 programs to states. Once a state's 404 program is approved and in effect, the Corps of Engineers will suspend processing of section 404 applications in the applicable waters and will transfer pending applications to the state agency responsible for administering the program. District engineers will assist EPA and the states in any way practicable to effect transfer and will develop appropriate procedures to ensure orderly and expeditious transfer.

Section 323.6 - Special policies and procedures.

(a) The Secretary of the Army has delegated to the Chief of Engineers the authority to issue or deny section 404 permits. The district engineer will review applications for permits for the discharge of dredged or fill material into waters of the United States in accordance with guidelines promulgated by the Administrator, EPA, under authority of section 404(b)(1) of the CWA. (see 40 CFR Part 230.) Subject to consideration of any economic impact on navigation and anchorage pursuant to section 404(b)(2), a permit will be denied if the discharge that would be authorized by such a permit would not comply with the 404(b)(1) guidelines. If the district engineer determines that the proposed discharge would comply with the 404(b)(1) guidelines, he will grant the permit unless issuance would be contrary to the public interest.

(b) The Corps will not issue a permit where the regional administrator of EPA has notified the district engineer and applicant in writing pursuant to 40 CFR 231.3(a)(1) that he intends to issue a public notice of a proposed determination to prohibit or withdraw the specification, or to deny, restrict or withdraw the use for specification, of any defined area as a disposal site in accordance with section 404(c) of the Clean Water Act. However the Corps will continue to complete the administrative processing of the application while the section 404(c) procedures are underway including completion of final coordination with EPA under 33 CFR Part 325.

33 CFR Part 328
Definition of Waters of the United States

AUTHORITY: 33 U.S.C. 1344.

Section 328.1 - Purpose.

This section defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps of Engineers under the Clean Water Act. It prescribes the policy, practice, and procedures to be used in determining the extent of jurisdiction of the Corps of Engineers concerning "waters of the United States." The terminology used by Section 404 of the Clean Water Act includes "navigable waters" which is defined at Section 502(7) of the Act as "waters of the United States including the territorial seas." To provide clarity and to avoid confusion with other Corps of Engineer regulatory programs, the term "waters of the United States" is used throughout 33 CFR Parts 320-330. This section does not apply to authorities under the Rivers and Harbors Act of 1899 except that some of the same waters may be regulated under both statutes (see 33 CFR Parts 322 and 329).

Section 328.2 - General scope.

Waters of the United States include those waters listed in Section 328.3(a) below. The lateral limits of jurisdiction in those waters may be divided into three categories. The categories include the territorial seas, tidal waters, and non-tidal waters (see 33 CFR 328.4 (a), (b), and (c), respectively).

Section 328.3 - Definitions.

For the purpose of this regulation these terms are defined as follows:

a. The term **"waters of the United States"** means
   1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   2. All interstate waters including interstate wetlands;
   3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
iii. Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.

   Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

b. The term **"wetlands"** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
c. The term **"adjacent"** means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."
d. The term **"high tide line"** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.
e. The term **"ordinary high water mark"** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
f. The term **"tidal waters"** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 328.4 - Limits of jurisdiction.

a. **Territorial Seas.** The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)
b. **Tidal Waters of the United States.** The landward limits of jurisdiction in tidal waters:
    1. Extends to the high tide line, or
    2. When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.
c. **Non-Tidal Waters of the United States.** The limits of jurisdiction in non-tidal waters:
    1. In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
    2. When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
    3. When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Section 328.5 - Changes in limits of waters of the United States.

Permanent changes of the shoreline configuration result in similar alterations of the boundaries of waters of the United States. Gradual changes which are due to natural causes and are perceptible only over some period of time constitute changes in the bed of a waterway which also change the boundaries of the waters of the United States. For example, changing sea levels or subsidence of land may cause some areas to become waters of the United States while siltation or a change in drainage may remove an area from waters of the United States. Man-made changes may affect the limits of waters of the United States; however, permanent changes should not be presumed until the particular circumstances have been examined and verified by the district engineer. Verification of changes to the lateral limits of jurisdiction may be obtained from the district engineer.

33 CFR Part 329
Definition of
Navigable Waters of the US

AUTHORITY: 33 U.S.C. 401 et seq.

Section 329.1 - Purpose

This regulation defines the term "navigable waters of the United States" as it is used to define authorities of the Corps of Engineers. It also prescribes the policy, practice and procedure to be used in determining the extent of the jurisdiction of the Corps of Engineers and in answering inquiries concerning "navigable waters of the United States." This definition does not apply to authorities under the Clean Water Act which definitions are described under 33 CFR Parts 323 and 328.

Section 329.2 - Applicability

This regulation is applicable to all Corps of Engineers districts and divisions having civil works responsibilities.

Section 329.3 - General policies

Precise definitions of "navigable waters of the United States" or "navigability" are ultimately dependent on judicial interpretation and cannot be made conclusively by administrative agencies. However, the policies and criteria contained in this regulation are in close conformance with the tests used by Federal courts and determinations made under this regulation are considered binding in regard to the activities of the Corps of Engineers.

Section 329.4 - General definition

Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity.

Section 329.5 General scope of determination

The several factors which must be examined when making a determination whether a waterbody is a navigable water of the United States are discussed in detail below. Generally, the following conditions must be satisfied:

a. Past, present, or potential presence of interstate or foreign commerce;
b. Physical capabilities for use by commerce as in paragraph (a) of this section; and
c. Defined geographic limits of the waterbody.

Section 329.6 - Interstate or foreign commerce

a. Nature of commerce: type, means, and extent of use. The types of commercial use of a waterway are extremely varied and will depend on the character of the region, its products, and the difficulties or dangers of navigation. It is the waterbody's capability of use by the public for purposes of transportation of commerce which is the determinative factor, and not the time, extent or manner of that use. As discussed in Section 329.9 of this Part, it is sufficient to establish the potential for commercial use at any past, present, or future time. Thus, sufficient commerce may be shown by historical use of canoes, bateaux, or other frontier craft, as long as that type of boat was common or well-suited to the place and period. Similarly, the particular items of commerce may vary widely, depending again on the region and period. The goods involved might be grain, furs, or other commerce of the time. Logs are a common example; transportation of logs has been a substantial and well-recognized commercial use of many navigable waters of the United States. Note, however, that the mere presence of floating logs will not of itself make the river "navigable"; the logs must have been related to a commercial venture. Similarly, the presence of recreational craft may indicate that a waterbody is capable of bearing some forms of commerce, either presently, in the future, or at a past point in time.
b. Nature of commerce: interstate and intrastate. Interstate commerce may of course be existent on an intrastate voyage which occurs only between places within the same state. It is only necessary that goods may be brought from, or eventually be destined to go to, another state. (For purposes of this regulation, the term "interstate commerce" hereinafter includes "foreign commerce" as well.)

Section 329.7 - Intrastate or interstate nature of waterway

A waterbody may be entirely within a state, yet still be capable of carrying interstate commerce. This is especially clear when it physically connects with a generally acknowledged avenue of interstate commerce, such as the ocean or one of the Great Lakes, and is yet wholly within one state. Nor is it necessary that there be a physically navigable connection across a state boundary. Where a waterbody extends through one or more states, but substantial portions, which are capable of bearing interstate commerce, are located in only one of the states, the entirety of the waterway up to the head (upper limit) of navigation is subject to Federal jurisdiction.

Section 329.8 - Improved or natural conditions of the waterbody

Determinations are not limited to the natural or original condition of the waterbody. Navigability may also be found where artificial aids have been or may be used to make the waterbody suitable for use in navigation.

a. **Existing improvements: artificial waterbodies.**
    1. An artificial channel may often constitute a navigable water of the United States, even though it has been privately developed and maintained, or passes through private property. The test is generally as developed above, that is, whether the waterbody is capable of use to transport interstate commerce. Canals which connect two navigable waters of the United States and which are used for commerce clearly fall within the test, and themselves become navigable. A canal open to navigable waters of the United States on only one end is itself navigable where it in fact supports interstate commerce. A canal or other artificial waterbody that is subject to ebb and flow of the tide is also a navigable water of the United States.
    2. The artificial waterbody may be a major portion of a river or harbor area or merely a minor backwash, slip, or turning area (see paragraph 329.12(b) of this Part).
    3. Private ownership of the lands underlying the waterbody, or of the lands through which it runs, does not preclude a finding of navigability. Ownership does become a controlling factor if a privately constructed and operated canal is not used to transport interstate commerce nor used by the public; it is then not considered to be a navigable water of the United States. However, a private waterbody, even though not itself navigable, may so affect the navigable capacity of nearby waters as to nevertheless be subject to certain regulatory authorities.

b. **Non-existing improvements, past or potential.** A waterbody may also be considered navigable depending on the feasibility of use to transport interstate commerce after the construction of whatever "reasonable" improvements may potentially be made. The improvement need not exist, be planned, nor even authorized; it is enough that potentially they could be made. What is a "reasonable" improvement is always a matter of degree; there must be a balance between cost and need at a time when the improvement would be (or would have been) useful. Thus, if an improvement were "reasonable" at a time of past use, the water was therefore navigable in law from that time forward. The changes in engineering practices or the coming of new industries with varying classes of freight may affect the type of the improvement; those which may be entirely reasonable in a thickly populated, highly developed industrial region may have been entirely too costly for the same region in the days of the pioneers. The determination of reasonable improvement is often similar to the cost analyses presently made in Corps of Engineers studies.

Section 329.9 - Time at which commerce exists or determination is made

a. **Past use.** A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in paragraph 329.8(b) of this Part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions. Nor does absence of use because of changed economic conditions affect the legal character of the waterbody. Once having attained the character of "navigable in law," the Federal authority remains in existence, and cannot be abandoned by administrative officers or court action. Nor is mere inattention or ambiguous action by Congress an abandonment of Federal control. However, express statutory declarations by Congress that described portions of a waterbody are non-navigable, or have been abandoned, are binding upon the Department of the Army. Each statute must be carefully examined, since Congress often reserves the power to amend the Act, or assigns special duties of supervision and control to the Secretary of the Army or Chief of Engineers.

b. **Future or potential use.** Navigability may also be found in a waterbody's susceptibility for use in its ordinary condition or by reasonable improvement to transport interstate commerce. This may be either in its natural or improved condition, and may thus be existent although there has been no actual use to date. Non-use in the past therefore does not prevent recognition of the potential for future use.

Section 329.10 - Existence of obstructions

A stream may be navigable despite the existence of falls, rapids, sand bars, bridges, portages, shifting currents, or similar obstructions. Thus, a waterway in its original condition might have had substantial obstructions which were overcome by frontier boats and/or portages, and nevertheless be a "channel" of commerce, even though boats had to be removed from the water in some stretches, or logs be brought around an obstruction by means of artificial chutes. However, the question is ultimately a matter of degree, and it must be recognized that there is some point beyond which navigability could not be established.

Section 329.11 - Geographic and jurisdictional limits of rivers and lakes

a. **Jurisdiction over entire bed.** Federal regulatory jurisdiction, and powers of improvement for navigation, extend laterally to the entire water surface and bed of a navigable waterbody, which includes all the land and waters below the ordinary high water mark. Jurisdiction thus extends to the edge (as determined above) of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation or other barriers.

Marshlands and similar areas are thus considered navigable in law, but only so far as the area is subject to inundation by the ordinary high waters.

1. The **"ordinary high water mark"** on non-tidal rivers is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas.
2. **Ownership** of a river or lake bed or of the lands between high and low water marks will vary according to state law; however, private ownership of the underlying lands has no bearing on the existence or extent of the dominant Federal jurisdiction over a navigable waterbody.

b. **Upper limit of navigability.** The character of a river will, at some point along its length, change from navigable to non-navigable. Very often that point will be at a major fall or rapids, or other place where there is a marked decrease in the navigable capacity of the river. The upper limit will therefore often be the same point traditionally recognized as the head of navigation, but may, under some of the tests described above, be at some point yet farther upstream.

Section 329.12 - Geographic and jurisdictional limits of oceanic and tidal waters

a. **Ocean and coastal waters.** The navigable waters of the United States over which Corps of Engineers regulatory jurisdiction extends include all ocean and coastal waters within a zone three geographic (nautical) miles seaward from the baseline (The Territorial Seas). Wider zones are recognized for special regulatory powers exercised over the outer continental shelf. (See 33 CFR 322.3(b)).

1. **Baseline defined.** Generally, where the shore directly contacts the open sea, the line on the shore reached by the ordinary low tides comprises the baseline from which the distance of three geographic miles is measured. The baseline has significance for both domestic and international law and is subject to precise definitions. Special problems arise when offshore rocks, islands, or other bodies exist, and the baseline may have to be drawn seaward of such bodies.
2. **Shoreward limit of jurisdiction.** Regulatory jurisdiction in coastal areas extends to the line on the shore reached by the plane of the mean (average) high water. Where precise determination of the actual location of the line becomes necessary, it must be established by survey with reference to the available tidal datum, preferably averaged over a period of 18.6 years. Less precise methods, such as observation of the "apparent shoreline" which is determined by reference to physical markings, lines of vegetation, or changes in type of vegetation, may be used only where an estimate is needed of the line reached by the mean high water.

b. **Bays and estuaries.** Regulatory jurisdiction extends to the entire surface and bed of all waterbodies subject to tidal action. Jurisdiction thus extends to the edge (as

determined by paragraph (a)(2) of this section) of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation, or other barriers. Marshlands and similar areas are thus considered "navigable in law," but only so far as the area is subject to inundation by the mean high waters. The relevant test is therefore the presence of the mean high tidal waters, and not the general test described above, which generally applies to inland rivers and lakes.

Section 329.13 - Geographic limits: shifting boundaries

Permanent changes of the shoreline configuration result in similar alterations of the boundaries of the navigable waters of the United States. Thus, gradual changes which are due to natural causes and are perceptible only over some period of time constitute changes in the bed of a waterbody which also change the shoreline boundaries of the navigable waters of the United States. However, an area will remain "navigable in law," even though no longer covered with water, whenever the change has occurred suddenly, or was caused by artificial forces intended to produce that change. For example, shifting sand bars within a river or estuary remain part of the navigable water of the United States, regardless that they may be dry at a particular point in time.

Section 329.14 - Determination of navigability

a. **Effect on determinations.** Although conclusive determinations of navigability can be made only by federal Courts, those made by federal agencies are nevertheless accorded substantial weight by the courts. It is therefore necessary that when jurisdictional questions arise, district personnel carefully investigate those waters which may be subject to Federal regulatory jurisdiction under guidelines set out above, as the resulting determination may have substantial impact upon a judicial body. Official determinations by an agency made in the past can be revised or reversed as necessary to reflect changed rules or interpretations of the law.

b. **Procedures of determination.** A determination whether a waterbody is a navigable water of the United States will be made by the division engineer, and will be based on a report of findings prepared at the district level in accordance with the criteria set out in this regulation. Each report of findings will be prepared by the district engineer, accompanied by an opinion of the district counsel, and forwarded to the division engineer for final determination. Each report of findings will be based substantially on applicable portions of the format in paragraph (c) of this section.

c. **Suggested format** of report of findings:
    1. Name of waterbody:
    2. Tributary to:
    3. Physical characteristics:
        i. Type: (river, bay, slough, estuary, etc.)

ii. Length:
iii. Approximate discharge volumes: Maximum, Minimum, Mean:
iv. Fall per mile:
v. Extent of tidal influence:
vi. Range between ordinary high and ordinary low water:
vii. Description of improvements to navigation not listed in paragraph (c)(5) of this section:

4. Nature and location of significant obstructions to navigation in portions of the waterbody used or potentially capable of use in interstate commerce:
5. Authorized projects:
   i. Nature, condition and location of any improvements made under projects authorized by Congress:
   ii. Description of projects authorized but not constructed:
   iii. List of known survey documents or reports describing the waterbody:
6. Past or present interstate commerce:
   i. General types, extent, and period in time:
   ii. Documentation if necessary:
7. Potential use for interstate commerce, if applicable:
   i. If in natural condition:
   ii. If improved:
8. Nature of jurisdiction known to have been exercised by Federal agencies if any:
9. State or Federal court decisions relating to navigability of the waterbody, if any:
10. Remarks:
11. Finding of navigability (with date) and recommendation for determination:

Section 329.15 - Inquiries regarding determinations

a. Findings and determinations should be made whenever a question arises regarding the navigability of a waterbody. Where no determination has been made, a report of findings will be prepared and forwarded to the division engineer, as described above. Inquiries may be answered by an interim reply which indicates that a final agency determination must be made by the division engineer. If a need develops for an emergency determination, district engineers may act in reliance on a finding prepared as in Section 329.14 of this Part. The report of findings should then be forwarded to the division engineer on an expedited basis.
b. Where determinations have been made by the division engineer, inquiries regarding the navigability of specific portions of waterbodies covered by these determinations may be answered as follows:

   This Department, in the administration of the laws enacted by Congress for the protection and preservation of the navigable waters of the United States, has determined that (River) (Bay) (Lake, etc.) is a navigable water of the United

States from mile to mile. Actions which modify or otherwise affect those waters are subject to the jurisdiction of this Department, whether such actions occur within or outside the navigable areas.

c. Specific inquiries regarding the jurisdiction of the Corps of Engineers can be answered only after a determination whether
    1. the waters are navigable waters of the United States or
    2. if not navigable, whether the proposed type of activity may nevertheless so affect the navigable waters of the United States that the assertion of regulatory jurisdiction is deemed necessary.

Section 329.16 - Use and maintenance of lists of determinations.

a. Tabulated lists of final determinations of navigability are to be maintained in each district office, and be updated as necessitated by court decisions, jurisdictional inquiries, or other changed conditions.
b. It should be noted that the lists represent only those waterbodies for which determinations have been made; absence from that list should not be taken as an indication that the waterbody is not navigable.
c. Deletions from the list are not authorized. If a change in status of a waterbody from navigable to non-navigable is deemed necessary, an updated finding should be forwarded to the division engineer; changes are not considered final until a determination has been made by the division engineer.

Jurisdictional Determination Review Process

EPA staff randomly selected and reviewed two hundred approved jurisdictional determinations (AJD) for waters of the United States, completed and published by the U.S. Army Corps of Engineers (Corps). Approximately four to six AJDs were selected for evaluation from each Corps District in the U.S., from the AJDs published on the individual Corps web pages. Nashville District did not have any AJDs published and available on their web pages; therefore, no AJDs were evaluated for this district. If fewer than four AJDs were published on a district's web page, all AJDs available were included in the review. Where published AJDs were divided into categories by state or by jurisdictional status, staff attempted to select AJDs from each category. All AJDs for sites containing only uplands were disregarded in this analysis.

EPA staff recorded information contained in each AJD, including the Corps District, assigned project number, date and location or name of the AJD, including the latitude and longitude, whether or not there were jurisdictional waters in the determination, a description of the waters, and the distance of wetlands, if any, from a jurisdictional tributary, which would include traditional navigable waters, relatively permanent waters, and non-relatively permanent waters with a significant nexus to a water of the U.S.

Of the two hundred AJDs reviewed for this analysis, four sites included wetlands or waters that are located further than 4,000 feet from a jurisdictional tributary.

- The site for the AJD numbered MVS-2012-0680 included a 1.05-acre wetland adjacent to a non-jurisdictional agricultural swale, which is 8,200 feet in length and becomes a tributary downstream of the swale before flowing to a TNW. There is overland sheet flow from the wetland to the swale. It appears that the wetland is adjacent to an excluded erosional feature and further than 4,000 feet from a jurisdictional tributary, and therefore not jurisdictional under the new rule.
- The site for the AJD numbered NWO-2014-01019 contained 0.008 acre of wetlands adjacent to a non-RPW, described as an ephemeral roadside drainage, which flows 4,475 feet through a storm sewer system and outfalls into a perennial RPW. These wetlands are jurisdictional. Under the new rule, these wetlands are adjacent to an excluded ditch, and more than 4,000 feet from a jurisdictional tributary, and therefore would not be jurisdictional.
- The AJD numbered POA-2014-369 included a lake located approximately 1.7 miles from the nearest TNW, which is also the nearest jurisdictional water body. This water is more than 4,000 feet from a jurisdictional tributary and would remain non-jurisdictional under the new rule.
- Finally, the AJD numbered MVP-2013-03097-LED included an approximately 7.5-acre wetland that flowed through ditches to an isolated mine pond, and is located approximately 14,000 feet from the nearest tributary. This wetland was determined to be non-jurisdictional and would be non-jurisdictional under the new rule.

Therefore, of two hundred AJDs reviewed, two included wetlands that are currently considered jurisdictional but would not be jurisdictional under the new rule due to their location beyond 4,000 feet from a jurisdictional tributary. The area of these two wetlands totals approximately 1.058 acres.

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Buffalo	2010-00071	1/12/2015	Amherst, NY	42.99	-78.72	No	800 feet from Brush Creek (RPW)	0.12 acre depressional area	Alison
Buffalo	2014-00710	10/15/2014	Avon, OH	41.47875	-81.98608	Yes	Approx 2,260 feet from Porter Creek (estimated from aerial imagery)	Wetlands adjacent to but not Wetlands directly abutting RPWs that flow directly or indirectly into TNWs; 0.95 acre, 2 wetlands	Alison
Buffalo	2015-00040	4/16/2015	Ithaca DPW	42.45323	-76.49469	Yes	No wetlands, an RPW	RPW no wetlands	Jason
Buffalo	2014-01150	11-Feb-15	Godfrey, Robert	43.27518	-76.49622	Yes	Pond, 500 feet away from trib	JD lists as pond however entire area is on NWI, so distance of wetland may be closer.	Jason
Buffalo	2014-01272	22-Dec-14	Bainbridge Township and City of A	41.34519	-81.35913	Yes	Wetland directly abutting RPW	Wetland directly abutting RPW	Jason
Buffalo	2004-001914	7-Oct-14	Toledo, Ohio	41.66554	-83.44424	No	583 feet to blue line "ditch"	called isolated, but would be JD based on new rule.	Jason
Chicago	LRC-2014-883	12/1/2014	Lombard, IL	41.84928	-88.02377	Yes	Approx 0.25 mile piped connection to RPW	1.78 acres - 2 wetlands with piped connection to RPW tributary.	Alison
Chicago	LRC-2014-355	1/5/2015	Gary, IN	41.5922	87.2628	Yes	650 feet from Des Plaines River	Direct connection through stormwater channel; 3 acres	Alison
Chicago	LRC-2014-883	1-Dec-14	Ken Loch Golf Course	41.84928	-88.02377	Yes	In urban area so hard to tell where trib is, but ~800-1600 feet	Chicago lists JDs as JD and NJD so not random. Took this one from JD list.	Jason
Chicago	LRC-2015-31	1/16/2015	Norton Farm	41.92893	-88.38663	No	1200 feet	This was from Chicago non-jd list. Was no, now Yes JD. High qualtity wetland. Was isolated would now be able to do sig nex.	Jason
Chicago	LRC-2014-240	11-Apr-14	Barrington, IL	42.11693	-88.19363	Yes	293 feet	Wetland W-1 is adjacent and contiguous to the tributary to Spring Creek, which has seasonal relative permanent flow, and exhibits a surface water connection to a traditional navigable waterway. Wetland W-2 is adjacent and contiguous to a roadside ditch that is tributary to Spring Creek.	Jason
Chicago	LRC-2014-352	22-May-14	Palatine, IL	42.104371	-88.067109	Yes	1391 feet using National Map, however JD says directly abutting.	Wetlands directly abutting RPWs that flow directly or indirectly into TNWs	Jason
Detroit	LRE-2014-00616-102	10/10/2014	New Haven, CT	41.07958	-85.02621	Yes	TNW - Maumee River	TNW present; no waters/wetlands above OHWM of TNW	Alison
Detroit	LRE-2014-00806-207b	1/15/2015	Baraga Township, MI	46.801	-88.476	Yes	1500 feet from Lake Superior	Part of a beach ridge swale complex of wetlands bordering Lake Superior, but separated by berm	Alison
Detroit	LRE-2014-00879-137	21-Jan-15	St. Joe College Public Access Site,	40.91257	-87.18630	Yes	Portion of wetland within 100 feet of TNW.		Jason
Detroit	LRE-1998-1170040-A14	9-Mar-15	Bridgewater Golf Course	41.38626	-85.03334	Yes (6 waters); No (2 waters)	Range between abutting and 2400 feet. Likely all previously JD would remain, and maybe two previous no's would be become yes, with Significant nexus.	8 JDs at this site. Originally 5 JD, and 3 NJD with one a detention pond. All are within 4,000 feet of tributary. One may qualify for exclusion under new rule.	Jason
Detroit	LRE-1991-120483-12-J13	5-Mar-15	Harsens Island, MI	42.597928	-82.559646	Yes	TNW and Wetlands Adjacent	Wetlands WC13, WC18, WC21, WC38, and WC44, are adjacent to and contiguous with the North Channel of the St. Clair River. Although separately labeled, these wetlands are all part of one contiguous system that continues onto offsite areas. These wetlands are located at or waterward of the Ordinary High Water Mark (OHWM) of the St. Clair River, which is coincident with 573.6 feet (IGLD 1985) elevation contour on the shore and are remnant evidence of multiple historic river channels within the St. Clair River delta in this location. Evidence of the remnant river channels are observable on various aerial photos submitted by the consultant. Waters onsite still provide functions and values necessary to maintain the physical, chemical and biological integrity of the North Channel of the St. Clair River and Lake St. Clair.	Jason
Detroit	LRE-2014-00827-157	8-Dec-14	Avilla, IN	41.340831	-85.33338	Yes	Wetland directly abutting RPW	Wetland directly abutting RPW	Jason
Huntington	LRH-2011-00646	1st QTR 2014	Jefferson Township, OH	38.86789	-82.90637	No	400 aerial feet; 350 aerial feet; 65 aerial feet	Hillside seep & 2 emergent depressions; no obvious hydro connection; surr. by uplands	Alison
Huntington	LRH-2014-71	7/11/2014	Powell, OH	40.200327	-83.112394	No		Swale with no bed&banks/OHWM; Pond surrounded by uplands.	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Huntington	LRH-2014-890	10-Oct-14	Joe Taylor Stream Work,	38 .25626	-82.52578	Yes	No wetlands, an RPW	Huntington broken up by State, picked one of each, this one is	Jason
Huntington	LRH-2014-00689	5-Sep-14	Upper Reach Sawmill Run	41.00742	-80.66392	Yes	No wetlands, an RPW	Huntington broken up by State, picked one of each - this one i	Jason
Louisville	LRL-2015-62	12/31/2014	Frankfort, IN	40.318065	-86.485105	Yes	Headwater ephemeral stream flows to S.F. Wildcat	Non-RPW flows indirectly into TNW	Alison
Louisville	LRL-2015-62	9/18/2014	Whitestown, IN	39.96857	-86.38972	No	Approx 760 feet to White Lick Creek (RPW)	0.47-acre depressional wetland - isolated, no hydro connection	Alison
Louisville	LRL-2014-654	7-Jan-15	Auburn Meadows	40.47997	-86.90647	No	2172 feet	described as isolated wetland with no hydro connection.	Jason
Louisville	LRL-2014-597	18-Sep-14	Eagle Creek Business Park	39.96857	-86.38972	No	247 feet	described as isolated, 247 feet to nearest trib and very close to RPW and even closer to floodway.	Jason
Pittsburg	LRP-2014-0437	12/12/2014	Harmar, PN	40.541297	-79.837489	No	Approx 1000 feet from RPW	2 wetlands, isolated; separated from other jurisdictional wetlands by large berm; do not drain to swale/roadside ditch to RPW as the other wetlands do	Alison
Pittsburg	LRP-2014-0437	12/12/2014	Harmar, PN	40.541297	-79.837489	Yes	Approx 1000 feet from RPW; surface connection through swale & ditch	4 wetlands, adjacent to non-RPW that flows into TNW	Alison
Pittsburg	LRP-2012-1596	5/1/2012	Erie, PA	42 05 28.6	80 9 19.3	Yes	Directly abutting tributary to Lake Erie	Wetlands Wetlands directly abutting RPW that flows to TNW	Alison
Pittsburg	2014-1182	2/10/2015	LRP, Hopedale North Railyard	40.34102	-80.93895	Yes, No	No map and no difference in Lat/Long. So difficult to tell. 1- 3 wetlands jd, 2- RPW, 3- RPW, 4- 6 wetlands and 6 ponds were isolated, now mining exemptions, 5- RPW and 2 Wetlands, 6 - RPW with 4 wetlands and 2 ponds in analysis. 7- RPW. 8 - RPW and 3 wetlands. 9 - RPW and one wetland	34 total features, but no map so difficult to measure, but likely none more than 4000 feet from tributary based on what I could tell from the JD. Some features may be exempt mining pits.	Jason
Pittsburg	LRP 2014-855	2/2/2015	Krendale Golf Course Well Pad Pr	40.86849	-79.95636	No	1270 feet	Isolated but would have flood storage function.	Jason
Memphis	MVM-2014-098	4/15/2014	Phillips County, AR	34.533483	-90.851517	No	Approx 1500' from nearest trib	0.4 acre forested wetland surr by farmland - JD states not in floodplain, no hydro connection	Alison
Memphis	MVM-2013-523	12/18/2013	Clarendon, AR	34.6931	-91.2319	No	Approx 1600' from Knight's Creek	Minnow ponds; constructed in uplands by diking/excavating dry land	Alison
Memphis	MVM-2013-367	3 September, 2	St. Francis River	35.01084	-90.71859	Yes	TNW	TNW	Jason
Memphis	MVM-2014-460	30 December, 2	MVM-2014-460	36.96815	-89.26208	No	2184 feet	called isolated, but would be JD based on new rule.	Jason
Memphis	MVM-2013-352	8/27/2012	MVM-2013-352	36.51830	-89.56040	Yes	TNW	TNW	Jason
New Orleans	MVN-2013-01597-SQ	11/22/2013	Iberville Parish, LA	30.096355	-91.114707	Yes	Wetlands directly abutting RPW	Wetlands Wetlands directly abutting RPW	Alison
New Orleans	MVN-2013-00381-SE	4/9/2013	St. Martin Parish, LA	30.067027	-91.492681	Yes	TNW - Atchafalaya River Basin	TNW	Alison
New Orleans	MVN 2014-00406-SE	4-Apr-14	Garon/Toussant	30.32634	-90.80955	Yes	Wetland abutting	Wetland connected all the way to tributary	Jason
New Orleans	MVN-2013-02502-SC	5-Nov-13	MVN-2013-02502-SC	30.082016	-93.228145	Yes	TNW	TNW	Jason
Rock Island	MVR-2013-1335	10/23/2013	Webster County, IA	42.511345	-94.336292	No	Approx 2,790 feet from nearest RPW	10.6 acre depressional wetland - isolated	Alison
Rock Island	MVR-2014-33	2/3/2014	Polk City, IA	41.689901	-93.756933	Yes	Wetlands directly abutting RPW	Wetland and pond excavated from stream; flow through impoundments/ponds into Little Beaver Creek	Alison
Rock Island	CEMVR-OD-P-2013-0829	3-Sep-13	City of Clive, IA	41.60785	-93.75177	Yes	No wetlands, an RPW	RPW no wetlands	Jason
Rock Island	CEMVR-OD-P-2014-534	4/30/2014	CEMVR-OD-P-2014-534	41.60325	-93.85288	Yes	Wetland abutting	wetland abutting	Jason
Rock Island	MVR-2013-1228	2/10/2014	Rock Falls, IL	41.78360	-89.69071	Yes	TNW	TNW	Jason
Rock Island	MVR-2014-206	2/12/2014	Johnston, Iowa	41.68064	-93.76551	Yes	Wetland directly abutting	Wetlands directly abutting an RPW where tributaries typically	Jason
St. Louis	MVS-2012-0680	6/25/2013	Eureka, MO	38.4958	-90.6045	Yes	8,200 feet of agricultural swale connects wetland to tributary 1; Tributary 1 flows 2,816 feet to Meramec River (TNW)	1.05 acre wetland adjacent to non-JD swale which gains bed & banks and OHWM downstream and becomes tributary. Overland sheetflow between wetlands and swale.	Alison
St. Louis	MVS-2012-689	10/10/2013	St. Charles, MO	38.8158	-90.4718	Yes	Adjacent wetlands 350 feet and 60 feet from non-RPW stream; additional wetland swales directly abutting stream	Adjacent and abutting wetlands to non-RPW which flows to TNW	Alison
St. Louis	MVS-2012-452	29-Jan-13	Poettker Tree Clearing and Ditch	38.79982	-89.25690	Yes	Meets tributary definition of rule, old guidance: Non-RPWs that flow directly or indirectly into TNWs	Non-RPWs that flow directly or indirectly into TNWs	Jason
St. Louis	MVS-2009-693	18-Feb-10	Forum Drive Bank Stabilization	37.96470	-91.75289	Yes	No wetlands, an RPW	RPW no wetlands	Jason
St. Louis	MVS-2010-438 (P-2779)	11-Feb-11	Diamond Head Dr. Storm Sewer	38.51600	-90.32710	Yes	No wetlands, an RPW	RPW no wetlands	Jason

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
St. Louis	MVS-2012-680	25-Jun-13	Winter Brothers Material Co. Eur	38.49580	-90.60450	Yes	3 Total - TNW, non-RPW and Wetland adjacent to non-RPW. Wetland is 2652 to TNW, within 500 year floodplain, so would have to do signex.		Jason
St. Paul	MVP-2015-00908	4/17/2015	Fall Lake, MN	47.874473	-91.787812	Yes	TNW	White Iron Lake	Alison
St. Paul	MVP-2014-03410	2/10/2015	Itasca County, MN	47.30757	-93.41639	No	AJD states there is no connectivity of mine pits to tributary. On aerial imagery, the lake appears to intersect an unnamed tributary (NHD) that flows into Holman Lake and the Swan River, but water levels will be lowered for resuming active mining.	19 inundated mine pits form the 1400 acre lake. No overflow to tributary system. Used recreationally, but mining will resume. No link to interstate commerse to serve as basis for jurisdiction.	Alison
St. Paul	2013-03097-LED	30-Apr-15	Hibbing, MN	47.43580	-92.98010	No	**14,000** feet away from Trib.	Wetland 14,000 feet away from Trib. Approximately 7.5 acre wetland adjacent to a ditch which flows into an isolated mining pit.	Jason
St. Paul	2014-03791	7-Apr-15	DWW, Mining Resources, LLC,	47.46730	-92.79448	No	2,777 feet is farthest wetland, rest are closer so all less then 4000 feet. A few may be excluded ponds.	SH-02, SH-05, SH-06, SH-18, SH-19, SH-22, SH-23, SH-24, SH-25, SH-60, and SH-62	Jason
St. Paul	2015-00413-WMS	9-Apr-15	Belcastro, Timothy	46.79356	-90.76305	Yes	TNW	TNW	Jason
St. Paul	2014-00109-MHK	24-Feb-15	Waste Management Orchard Ridg	43.18617	-88.06923	Yes	Tributary, RPW		Jason
Vicksburg	MVK-2013-00980	2/12/2014	Richland Parish, LA	32.30698	-91.90536	Yes	Adjacent/Wetlands directly abutting TNW	Wetlands adjacent to TNW	Alison
Vicksburg	MVK-2013-00834	2/12/2014	Bossier Parish, LA	32.66287	-93.65737	Yes	Wetlands directly abutting RPW	Located in 100-500 yr floodplain; Wetlands directly abutting RPW	Alison
Vicksburg	MVK-2012-00909-JD2	29-Jan-13	MVK-2012-00909-JD2	32.77884	-94.00450	Yes	Wetland fringe adjacent to Caddo Lake a TNW	Tributary runs through wetland to next portion of lake.	Jason
Baltimore	NAB-2013-02078	4/23/2015	Millersville, MD	39.046011	-76.666222	No	1800 feet to nearest RPW (across farm fields)	Lack surface connection to tributary	Alison
Baltimore	NAB-2014-00239	6/13/2014	Hollywood, MD	30 19 30.41	76 33 21.61	Yes	Wetlands directly abutting RPW	RPW & Forested wetlands that directly abut the RPW	Alison
Baltimore	2012-61112	27-Sep-13	Brandy Farms Lane	39.04352	-76.66675	Yes	Wetland abutting		Jason
Baltimore	2013-61412	16-Dec-13	(Town of St. Michaels-Harbor Roa	38.78444	-76.21944	Yes	2 (*Wetland abutting and TNW)		Jason
Baltimore	2012-61566	22-May-14	Deale, MD	38.77556	-76.56250	Yes	TNW		Jason
Baltimore	2012-03224-M24	March 11, 2014	Glen Burnie, MD	39.17786	-76.54453	Yes	Wetland directly abutting	Abutting trib now but enters into stormwater pipe, where pipe outlets appears to be 2500 feet away.	Jason
New England	NAE-2005-1505	5/16/2012	Danberry, CT	41.39489	-73.51726	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
New England	NAE-2012-0261	3/14/2012	Rutland, VT	43.598592	-72.98308	No	Approx 1800 feet from RPW, Otter Creek	Mowed wet meadow surrounded by pavement/developlemt; No hydro connection to RPW/TNW.	Alison
New England	NAE-2012-1813	31-Oct-12	Greensboro, VT	44.56976	72.29756	No	Wetlands are 500-985 feet to a tributary	called isolated, but would be JD based on new rule.	Jason
New England	NAE-2006-1542	17-Feb-12	Lebanon, CT	41.61861	-72.21528	Yes	1113 feet	adjacent to but not directly abutting.	Jason
New England	NAE-2010-1442	20-Oct-10	Lee, MA	42.27823	-73.26975	Yes	620 feet	adjacent to TNW.	Jason
New England	NAE-2006-3923	16-Aug-11	East Montpelier, VT	44.27482	-72.45257	Yes	150 feet	Winooski River and about 150 linear ft. from OHW of the	Jason
New York	NAN-2014-01229	1/29/2015	Stillwater, NY	42.94935	-73.75118	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
New York	NAN-2014-00659	11/5/2014	Mount Pleasant, NY	41.084787	-73.815489	No	0.29 miles from closest TNW	Wetlands isolated from tributaries; no confined surface connections	Alison
New York	NAN-2013-00575	1/17/2014	Town of Colonie, NY	42.7404	-73.8274	Yes	wetlands located 20 feet from stream, within 1-2 year floodplain of RPW.	RPW and abutting and neighboring wetlands.	Alison
New York	NAN-2012-00753	6/4/2014	Fort Ann, NY	43.4617	-73.4554	No	400 feet from ephemeral stream; 600 feet from RPW, intermittent stream	Isolated wetlands with no surface connection to nearest tributaries; not in the 100-year floodplain.	Alison
New York	NAN-2014-01377	1/21/2015	Halfmoon, NY	42.86141	-73.74444	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
New York	NAN-2014-00321-JD2	1/26/2015	LaGrange, NY	41.652	-73.8525	Yes	Wetlands adjacent to RPW within floodplain - approx 1,000 feet away from RPW		Alison
Norfolk	NAO-2014-2194	4/6/2015	Suffolk, VA	36.7748	-76.5583	Yes & No	Unable to determine based on information provided.	One wetland on site considered isolated with no surface connection to WOUS. Unable to determine distance to RPW/TNW.	Alison
Norfolk	NAO-2014-2269	3/24/2015	Chesapeake, VA	36.6267	-76.2167	No	80 feet from channelized WOUS	No surface connection from wetlands to channelized WOUS 80 feet away. Would be jurisdictional under the new rule (within 100-feet of a tributary).	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Norfolk	NAO-2013-1530	12/16/2013	Sussex County, VA	37.071437	-77.150541	Yes	Wetlands Wetlands directly abutting RPW	Wetlands directly abutting perennial RPW	Alison
Norfolk	NAO-2014-00292	2/14/2014	Maxie, VA	37 17' 10"	82 11' 50.5"	Yes	RPW flows directly to TNW	Perennial RPW flows to TNW	Alison
Norfolk	NAO-2014-1725	11/5/2014	New Kent County, VA	37.514898	-76.85702	Yes	Wetlands directly abutting RPW and TNW	TNWs and RPWs, with wetlands directly abutting both.	Alison
Norfolk	NAO-2003-2873	12/12/2013	Dinwiddie County, VA	36.914306	-77.556139	Yes	Wetlands directly abutting RPW	Perennial RPW and directly abutting wetlands.	Alison
Philadelphia	NAP-2013-852-24	12/3/2013	Camden, NJ	39.96573	-75.086544	Yes	Wetland within 100 feet (possibly abutting) and wetland approx 350 feet from TNW	Wetlands both within 100-year floodplain of Delaware River - both considered abutting/neighboring TNW.	Alison
Philadelphia	NAP-2009-576	8/27/2010	Strathmere, NJ	39.19466°	-74.66288	Yes	TNW and adjacent wetlands	Wetlands are tidal and/or contiguous to the tidal waters of Strathmere Bay,	Alison
Philadelphia	NAP-2011-00069	4/10/2015	Bethlehem Township, PA	40.677984	-75.302168	No	Possibly within 100 feet of Green Pond, separated by road. Jurisdictional status of pond is unknown.	Geographically isolated wetlands, occupying lowest landscape position on property. May be jurisdictional under new rule.	Alison
Philadelphia	NAP-2013-0069-76	5/14/2013	Norwood Borough, PA	39.885543	-75.287871	Yes	TNW and adjacent wetlands	Tidal creek tributary to navigable water of the U.S.; wetlands contiguous with perennial tributary	Alison
Philadelphia	NAP-2011-01032	1/18/2012	Stafford Township, NJ	39.8848	-74.28134	Yes	TNW and adjacent wetlands	Tidal creek tributary to navigable water of the U.S.; wetlands contiguous with tributary and below the high tide line.	Alison
Philadelphia	NAP-2013-00835	8/14/2013	Borough of Avalon, NJ	39.081617	-74.73858	Yes	TNW and adjacent wetlands	Tidal creek TNW with contiguous wetlands.	Alison
Kansas City	NWK-2014-1310	10/31/2014	Boonville, MO	38.977446	-92.750912	Yes	RPW	Perennial stream flows directly into TNW	Alison
Kansas City	NWK-2014-1008	8/14/2014	Mitchell County, KS	39.4132	-97.9508	No	On NHD map, these ditches flow into Lost Creek, an RPW, but per the JD it is an isolated ditch.	Isolated stream and wetlands - no hydrologic connection (per JD)	Alison
Kansas City	NWK-2012-00559	5/29/2014	Osage County, MO	38.463516	-92.16584	Yes	TNW	TNW -Osage River	Alison
Kansas City	NWK-2013-00682	3/10/2014	Linn County, MO	39.77601	-93.22653	Yes	RPW flows directly to TNW	Perennial stream flows directly into TNW	Alison
Kansas City	NWK-2014-00982	8/13/2014	Neosho County, KS	37.71973	-95.45725	Yes	TNW	TNW - Neosho River	Alison
Kansas City	NWK-2014-00908-2	9/5/2014	Labette County, KS	37.33139	-95.1023	Yes	Wetlands abutting non-RPW with significant nexus		Alison
Omaha	NWO-2014-02453	3/17/2015	Gretna, NE	41.137988	-96.227645	Yes	Wetlands directly abutting tributary which flows to Missouri river about 1-2 miles away	Non-RPW flows into TNW; wetlands adjacent to non-RPW	Alison
	NWO-2014-01019	11/13/2014	Omaha, NE	41.201848	-96.08131	Yes	Ephemeral roadside drainage with adajcent wetlands, flows 4,475 ft through storm sewer system to Hell Creek (perennial RPW), which flows 5,900 feet to Papillion Creek (RPW) which flows 20 miles to Missouri River (TNW)	Non-RPW flows into TNW; wetlands adjacent to non-RPW (0.008 acre). Appears wetlands may be adjacent to a non-jurisdictional ditch which is more than 4,000 feet from the next tributary, and would therefore, likely not be considered "neighboring" under the new rule.	Alison
Omaha	NWO-2014-02402	2/25/2015	Hall County, NE	40.766432	-98.664892	No		Wetland within isolated re-use pit	Alison
Omaha	NWO-2014-01919	11/28/2014	Lincoln, NE	40.829155	-96.665056	Yes	Drainage ditch is non-RPW that flows 2,600 feet through storm sewer to outfall into RPW, which flows 7,000 feet into TNW.	Non-RPW flows to TNW; Drainage is thought to be modified /channelized stream.	Alison
Omaha	NWO-2013-00485	11/17/2014	Omaha, NE	41.24376	-96.214809	Yes	Wetlands directly abutting RPW	RPW with wetlands directly abutting the RPW.	Alison
Omaha	NOW-2014-02340	12/5/2014	Gosper County, NE	40.67545	-99.69016	No	0.25 miles from nearest RPW (in different HUC12); 0.75 mile from nearest RPW in the same HUC12	Isolated depressional wetland	Alison
Portland	NWP-2014-487	3/27/2015	Astoria, OR	46.09371	-123.61734	Yes	Non-RPW flows to TNW; Impoundment of non-RPW	Non-RPW, Impoundments created from WOUS - reservoir that flows into Columbia River	Alison
Portland	NWP-2014-247	11/24/2014	Beaverton, OR	45.5737	-122.8499	Yes, No	Abbey Creek (RPW) - 0.29 mi from site	Wetland A - adjacent to ditch that flows to Abbey Creek; Wetland B - isolated, no hydro connection to WOUS	Alison
Portland	NWP-2015-047	2/24/2015	Junction City, OR	44.200333	-123.2014	No	Approx 1500 feet from nearest RPW.	Isolated log pond that receives all flow from project site. No outlet to nearest jurisdictional waterway.	Alison
Portland	NWP-2012-452	10/27/2014	Hillsboro, OR	45.497167	-122.90266	No	Unable to determine based on information provided.	Isolated wetland, 20 feet from stormwater conveyance ditch and active railroad.	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Portland	NWP-2013-42	3/18/2013	Beaverton, OR	45.508362	-122.8318	Yes	Wetlands directly abutting RPW; confined surface connection to RPW; Some wetlands 400 feet from RPW, but within 100 feet of wetlands abutting the creek, in the floodplain.	Some wetlands Wetlands directly abutting RPW; wetlands adjacent, but not directly abutting have confined surface connection to RPW through stormwater treatment system, including wetland swale and pipe conveyance. One wetland separated by berm, but is within the floodplain and within 100 feet of wetlands abutting the creek.	Alison
Portland	NWP-2009-639	5/1/2012	Portland, OR	45.62265	-122.77644	No	Over 1,200 feet from nearest jurisdictional wetlands that drain to TNW.	Isolated wetlands with no surface connection to TNW.	Alison
Seattle	NWS-2015-181	4/14/2015	Tekoa, WA	47.13	-117.04	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
Seattle	NWS-2013-1139	9/23/2014	Frederickson, WA	47.12139	-122.3575	No		1/2 acre wetland drains to regional infiltration facility; no connection to WOUS	Alison
Seattle	NWS-2013-463	2/4/2015	Des Moines, WA	47.3499	-122.31402	No		Ditch and 4 isolated depressional/slope wetlands with no surface connection to waters of the U.S.	Alison
Seattle	NWS-2014-669	12/2/2014	Hoodsport, WA	47.481944	-123.24609	Yes	RPW that flows directly to TNW	Lake managed by hydroelectirc facility empties to TNW.	Alison
Seattle	NWS-2014-770	9/17/2014	Near Cle Elum, WA	47.1244	-120.0601	Yes	RPW that flows directly to TNW		Alison
Seattle	NWS-2014-874	1/8/2014	Sammamish, WA	47.59356	-122.00869	No		Isolated wetlands with no surface connection to nearest tributaries	Alison
Walla Walla	NWW-2005-00043	7/11/2014	St. Charles, ID	42.09949	-111.38162	Yes	Wetlands directly abutting TNW	Beark Lake (TNW) and wetlands adjacent to TNW	Alison
Walla Walla	NWW-2014-264	7/11/2014	Declo, ID	42.52703	-113.67307	Yes	Directly abutting impoundment of TNW	Impoundment of TNW; wetlands adjacent to TNW	Alison
Alaska	POA-2013-448	1/23/2014	Girdwood, AK	60.88034	-149.07909	Yes	400 feet from TNW	TNW with adjacent wetlands all within 400 feet of the TNW	Alison
Alaska	POA-2014-369	9/25/2014	Clear Air Station, AK	64.2971	-149.1943	No	1.7 miles from TNW	Ditches flow to Lake with no outlet; Lake is 1.7 miles from nearest TNW, Nenana River.	Alison
Alaska	POA-2013-419	3/3/2014	Nenana, AK	64.55604	-149.11685	Yes	Wetlands directly abutting TNW, within 100 feet of TNW	Wetlands directly abutting or neighboring within 100 feet of TNW	Alison
Alaska	POA-2004-1564	12/29/2014	AK (no city/county)	64.004	-146.308	Yes	Wetlands directly abutting RPW	Wetlands directly abutting perennial RPW	Alison
Alaska	POA-2014-433	10/2/2014	Anchorage, AK	61.1897	-149.8457	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW (perennial man-made ditch that flows to pipe to Fish Creek which drains directly to TNW).	Alison
Alaska	POA-2015-00096	2/21/2014	Tofty, AK	65.0997	-150.8171	Yes	Wetlands Wetlands directly abutting RPW	Perennial RPW with wetland abutting the RPW.	Alison
Honolulu	POH-2010-00102	11/5/2010	Kawaihae, HI	20.0948	-155.81071	Yes	Non-RPW flows to TNW	Ephemeral stream contributes freshwater, sediment, and nutrients to coral reef and bay during high rainfall events.	Alison
Honolulu	POH-2012-00066	2/25/2013	Hanamaulu, HI	22.020541	-159.35879	No		Ephemeral drainage features, artificially flooded for cattle; one drainage feature conveys water to a wetland periodically, but no connection to TNW	Alison
Honolulu	POH-2011-00121	4/30/2011	Barber's Point, HI	21.3074	-158.0522	No		Isolated saline sink hole with no input/outfall, on karst plain.	Alison
Honolulu	POH-2013-00037	3/18/2013	Kaneohe, HI	21.40355	-157.81003	Yes	RPW	RPW that flows directly or indirectly into TNW	Alison
Honolulu	POH-2010-0339	5/11/2011	Haleiwa, HI	21.5907	-158.1033	Yes	Wetlands abutting non-RPW with significant nexus	Non-RPW and adjacent wetlands within flows into RPW stream and into TNW, carrying most of town's stormwater runoff flows.	Alison
Honolulu	POH-2012-00235	10/26/2012	Kaneohe, HI	21.40895	-157.78427	Yes	RPW	Seasonal RPW that flows to TNW.	Alison
Albuquerque	SPA-2007-00481	10/4/2012	Colorado Spring, CO	38.9805	-104.7517	Yes; No	Wetlands directly abutting jurisidctional tributary	Non-RPW - ephemeral channels with directly abutting wetlands (JD) alternating with upland swales (non-JD); flows into ditch and pipe perennial at outfall (JD)	Alison
Albuquerque	SPA-2012-00299	3/18/2014	Albuquerque, NM	35.04573	-106.5223	Yes	Non-RPW flows to TNW	Ephemeral arroyo & compound tributary to the arroyo; drains to Rio Grande	Alison
Albuquerque	SPA-2011-346	11/13/2012	Cloudcroft, NM	32.8554	-105.5991	Yes	Wetlands Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
Albuquerque	SPA-2011-00386	11/8/2012	Albuquerque, NM	35.204737	-106.68095	Yes	Non-RPW flows to TNW	Arroyo contributes large amount of stormwater to Rio Grande, including sediment.	Alison
Albuquerque	SPA-2012-00190	11/13/2012	Albuquerque, NM	35.156562	-106.52789	Yes	Non-RPW flows to TNW	Non-RPW headwaters with significant nexus to TNWs	Alison
Albuquerque	SPA-2012-00180	6/6/2012	Loving, NM	32.003273	-103.73126	No	Excluded ephemeral features. Nearest TNW is 12 miles away.	Ephemeral drainages that terminate on-site with no outlet.	Alison
Los Angeles	SPL-2014-585	9/30/2014	Port Hueneme, CA	34.14741	-119.17402	Yes	TNW	TNW - Oxnard Industrial Drain (tidal)	Alison
Los Angeles	SPL-2014-00229	8/15/2013	Coconino, AZ	35.9664	-112.114	No	Excluded ephemeral ditch; 83 river miles/43 aerial r	Ephemeral drainage ditch with no sig nex to TNW	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Los Angeles	SPL-2014-0583	3/13/2013	Saticoy, CA	34.299	-119.109	Yes	Wetlands directly abutting RPW	Wetlands Wetlands directly abutting RPW with perennial flow	Alison
Los Angeles	SPL-2012-00674	1/29/2014	Val Verde, CA	34.44861	-118.64344	No		Debris basins constructed in uplands, drain to stormwater system which drains to RPW and eventually TNW.	Alison
Los Angeles	SPL-2014-262	4/30/2014	Camarillo, CA	34.20306	-119.03369	Yes	Non-RPW flows to TNW	Non-RPW channel drains 800 acres of urban/agricultural land to TNW 7 miles downstream and has significant nexus	Alison
Los Angeles	SPL-2007-02247	12/5/2012	Farmington, UT	40.98967	-111.92632	Tes	Wetlands Wetlands directly abutting RPW	Wetlands contiguous with RPW that flows directly into TNW.	Alison
Sacramento	SPK-2008-01110	12/18/2014	Sulphur, NV	40.9212	-118.6443	No		Confined basin - all streams terminate in Black Rock Desert playa lake bed	Alison
Sacramento	SPK-2007-01827	2/12/2015	Bountiful, UT	40.9015	-111.928	No		Depressional wetlands, groundwater driven - uplands between wetlands raised with fill material; wetlands will not overflow to culvert to connect to stormwater ditch.	Alison
Sacramento	SPK-2015-00117	2/12/2015	Mesquite, NV	36.7896	-114.1148	Yes	Wetlands directly abutting RPW	Wetlands Wetlands directly abutting RPW that flows to TNW; within active floodplain	Alison
Sacramento	SPK-2014-00783	1/28/2015	Vineyard, UT	40.301388	-111.75124	Yes, No	Wetlands directly abutting RPW; isolated wetlands located 0.5 miles from nearest TNW.	One wetland is adjacent to perennial drainage ditch via culvert. Remaining wetlands considered isolated, depressional with no surface conenection to jurisdictional waters.	Alison
Sacramento	SPK-2002-00766	4/24/2014	Redding, CA	40.566141	-122.38271	Yes	non-RPW flows to TNW	non-RPW collects stormwater and flows directly to RPW which outfalls to Sacramento River (TNW).	Alison
Sacramento	SPK-2014-01084	3/10/2015	Cortez, CO	37.41216	-108.55246	Yes, No		4 wetlands supported by "leaky" irrigation ditches and not jurisdictional	Alison
San Francisco	SPF-2014-00101	5/22/2014	Sonoma County, CA	38.2179	-122.4613	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
San Francisco	SPF-2013-03845	7/15/2014	Benicia, CA	38.04456	-122.16154	Yes	Wetlands directly abutting TNW	TNW (tidal) and adjacent wetlands	Alison
San Francisco	SPF-29268	3/6/2013	Pittsburge, CA	37.98348	-121.86067	Yes	Wetlands directly abutting RPW	Wetlands Wetlands directly abutting RPW that flows to TNW	Alison
San Francisco	SPF-1992-19699S	1/16/2013	Pleasanton, CA	37.65217	-121.84368	Yes	Ephemeral drainage with 2 ephemeral tributaries eventually flows to RPW & TNW.	RPWs and non-RPWs that flow to TNWs;one isolated wetland at bottom of three hills with no hyrdologic connection	Alison
San Francisco	SPF-2013-00297S	7/7/2014	Alameda County, CA	37.730149	-122.12704	Yes	Wetlands directly abutting RPW	TNW, RPW, Non-RPW and wetlands abutting RPW - all jurisdictional	Alison
San Francisco	SPF-2012-00075S	7/2/2013	Martinex, CA	38.026	-122.1055	Yes	Wetlands adjacent to TNW	TNW, RPW and wetlands adjacent to TNWs	Alison
Fort Worth	SWF-2011-00192	8/6/2013	Luling, TX	29.36102	-96.43508	Yes, No	Wetlands abutting JD non-RPW streams	Non-RPW streams with OHWM that drain to TNW, and adjacent wetlands; isolated wetlands adjacent to channels with no OHWM	Alison
Fort Worth	SWF-2011-00398	10/23/2013	Laredo, TX	27.553811	-99.165357	No		Ponds excavated in uplands (isolated); channels lacking OHWM	Alison
Fort Worth	SWF-2014-00103	3/11/2014	Coppell, TX	32.97758	-97.0161	No	Unable to determine based on information provided.	Depressional forested wetland receives drainage from trapezoidal constructed channel. Water ponds in wetlands, and some sheetflows down-gradient to farm pond, which drains through swale to stream channel and to nearest RPW Denton Creek. Considered to have speculative effect on the RPW.	Alison
Fort Worth	SWF-2010-121	5/18/2010	Ennis, TX	32.1808	-96.361	Yes	Wetlands directly abutting non-RPW with significant nexus	non-RPWs and adjacent wetlands	Alison
Fort Worth	SWF-2009-00513	4/6/2010	San Antonio, TX	29.3841	-98.54722	No	Excluded ditch	Ditch excavated in uplands without relatively permanent flow.	Alison
Fort Worth	SWF-2009-00108	3/13/2009	Oglesby, TX	31.1924	-97.2914	Yes	RPW flows directly to TNW	Perennial RPW flows to TNW	Alison
Galveston	SWG-2014-00154	11/14/2014	Houston, TX	29.930848	-95.329978	No	Approx 3,700 feet from Greens Bayou	Depressional, isolated wetlands	Alison
Galveston	SWG-2014-00674	10/30/2014	Berclair, TX	28.61769	-97.63686	Yes	Wetland adjacent to non-RPW trib (ephemeral) - 0.78 mile (4,135 feet) to intermittent water; 10.60 miles to RPW	Non-RPW flows indirectly into TNW ; 0.62 acre wetland directly abuts ephemeral non-RPW, but non-RPW has significant nexus. Ephemeral stream would be jurisdictional tributary under the new rule, so it appears the wetlands would remain jurisdictional.	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Galveston	SWG-2012-00714	9/19/2014	Rockport, TX	27.99669	-97.06974	Yes	Wetlands abutting TNW	Wetlands directly abut Redfish Bay, a TNW.	Alison
Galveston	SWG-2014-00862	11/25/2014	Friendswood, TX	29.584693	-95.213671	Yes	Wetlands abutting RPW	RPW (perennial) and wetlands directly abutting the RPW	Alison
Galveston	SWG-2014-01039	1/14/2015	Port Mansfield, TX	26.567431	-97.426995	Yes	TNW	TNW	Alison
Galveston	SWG-2006-02562	6/25/2014	Ingleside, TX	27.82112	-97.19224	Yes	TNW	TNW	Alison
Little Rock	SWL-2013-00418	4/10/2015	North Little Rock, AR	34.8275	-92.38503	Yes	wetlands have discrete hydrologic connection to the RPWs/non-RPWs	RPW and non-RPW streams; wetlands adjacent but not directly abutting; non-JD swales connect wetlands to RPW/non-RPW tribs	Alison
Little Rock	SWL-2013-18816	1/20/2015	Springdale, AR	36.172	-94.19	No	Within 500 feet of NHD-mapped stream, but may be condisered "upland drain" in this JD	Upland drain; emergent wetland in dewatered farm pond; emergent fringe around dredged pond. Geographically isolated.	Alison
Little Rock	SWL-2014-00301	11/20/2014	Fayetteville, AR	36.091219	-94.21366	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW	Alison
Little Rock	SWL-2014-00102	12/3/2014	Neelyville, MO	36.56942	-90.47436	Yes	Wetlands directly abutting RPW	Wetland abuts unnamed seasonal RPW tributary to Cane Creek Ditch.	Alison
Little Rock	SWL-2014-00339	11/7/2014	Little Rock, AR	34.75648	-92.29555	Yes	TNW and RPW	Arkansas River (TNW) and intermittent RPW tributary	Alison
Little Rock	SWL-2015-00018	1/12/2015	Vilonia, AR	35.097605	-92.019372	Yes	Wetlands directly abutting RPWs	3 intermittent RPWs and wetlands directly abutting the RPWs	Alison
Tulsa	SWT-2013-000237	8/15/2013	Muskogee, OK	35.7685	-95.4031	Yes	non-RPW flows to TNW	non-RPW flows into Arkansas River (TNW); active floodplain	Alison
Tulsa	SWT-2014-408	9/10/2014	Tulsa, OK	35.978583	-95.905041	No	Approx 2,800 aerial feet to Arkansas River	Wetlands separated from WOUS by 2 roadside berms and culvertless roadway	Alison
Tulsa	SWT-2014-00303	6/25/2014	Broken Arrow, OK	35.9844	-95.8262	Yes	Non-RPW flows to TNW	Intermittent stream flows indirectly into TNW	Alison
Tulsa	SWT-2014-566	10/28/2014	Oklahoma City, OK	35.4148	-97.6697	Yes	Non-RPW flows to TNW	Non-RPW flows to 2 unnamed tributaries and then to Campbell Creek, to the Canadian River.	Alison
Charleston	SAC-2006-00770	3/11/2015	North Myrtle Beach, SC	33.821	-78.694	Yes	Approx 3,800+ feet from Atlantic Ocean (no confined surface connection)	0.35 acre freshwater wetlands adjacent to TNW - considered connected because all stormwater in the area drains to Atlantic Ocean	Alison
Charleston	SAC-2014-00577	3/4/2015	Conway, SC	33.890688	-78.942584	Yes	Wetlands directly abutting RPW		Alison
Charleston	SAC-2005-41250	10/14/2014	Oak Grove, SC	33.987095	-81.121735	No	Unable to determine based on information provide	Isolated wetlands surrounded by development. One wetland flows through culvert but spreads onto uplands.	Alison
Charleston	SAC-2014-00761	2/5/2015	Irmo, SC	34.058851	-81.123961	Yes	RPWs	2 seasonal RPWs	Alison
Charleston	SAC-2012-00146	10/27/2014	Charleston, SC	32.86359	-80.07319	Yes	Wetlands Wetlands directly abutting TNW; additional adjacent wetlands connected to the TWN through ditches; adjacent wetlands located 40-200 feet from the TNW.	Tidal wetlands contiguous with tidal TNW. Adjacent wetlands in close proximity to TNW and abutting wetlands.	Alison
Charleston	SAC-2012-00704	1/27/2015	Dorchester County, SC	33.052837	-80.217855	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW.	Alison
Jacksonville	SAJ-2013-02807	2/4/2014	Riverview, FL	27.792551	-82.28878	Yes	Wetlands directly abutting RPW	Wetlands abutting headwaters of perennial stream	Alison
Jacksonville	SAJ-1999-1251	8/24/2014	Naples, FL	26.1375	-81.67917	Yes	Discrete surface connection to RPW	Wetlands flow into Canal (RPW) that discharges to Rookery Bay (TNW)	Alison
Jacksonville	SAJ-2014-02094	9/2/2014	Gainesville, FL	30.0755	-81.5671	No	Closest TNW is 2 miles south of site	Wetland drains via ditch into Calf Pond sinkhole - hydrologically closed basin (karst system).	Alison
Jacksonville	SAJ-2015-00092	3/5/2015	Jacksonville, FL	30.291	-81.5348	No	Upland ridge separates non-jurisdictional wetlands from jurisdcitional wetlands by a minimum of 120 feet.	Fill and development separated wetlands that were historically connected.	Alison
Jacksonville	SAJ-2014-02483	10/20/2014	St. Augustine, FL	30.005211	-81.546675	Yes	Wetlands Wetlands directly abutting RPW; neighboring wetland separated by logging road (distance unknown, but presumably within 100 feet of other wetland.)	RPWs and wetlands directly abutting the RPW and adjacent wetlands, separated by a logging road, but has a significant nexus when analyzed with the larger abutting wetland.	Alison
Jacksonville	SAJ-2014-02776	3/16/2015	Marathon, FL	24.710083	-81.07511	Yes	TNW and adjacent wetlands	Tidal canal and wetlands directly abutting the TNW.	Alison
Mobile	SAM-2014-01367	4/30/2015	Long Beach, MS	30.343056	-89.142316	Yes	TNW	Mississippi Sound (TNW)	Alison
Savannah	SAS-2014-00739	11/26/2014	Savannah, GA	32.1234	-81.1234	Yes	Wetlands directly abutting RPW	Directly abuts tributary that drains to storm drain and to Ogeechee River (TNW).	Alison

Corps District	Project Number	Date of JD	Location/name	Lat.	Long.	Jurisdictional?	Distance of Wetlands from RPW/TNW	Description	Reviewer
Savannah	SAS-2014-00582	9/24/2014	Sea Island, GA	31.202992	-81.331415	Yes	TNW, Tidal wetlands adjacent to TNW		Alison
Savannah	SAS-2014-00519	8/12/2014	Springfield, GA	32.386758	-81.331188	No	740 feet from nearest WOUS	Isolated depressional wetland; no hydro connection to TNW	Alison
Savannah	SAS-2014-00399	9/25/2014	Folkston, GA	31.037	-81.9736	No	1,300 feet from nearest WOUS	Borrow area with wetlands, but no hydro connection to other waters on site	Alison
Savannah	SAS-2014-00580	9/8/2014	McDuffie County, GA	33.52357	-82.430456	No	1,500 feet from nearest RPW	0.12 acre isolated wetland not within 100-year floodplain, surrounded by uplands 6-8 feet above surface elevation of wetland.	Alison
Savannah	SAS-2013-00806	11/4/2013	Savannah, GA	32.0359	-81.0086	No	Excluded stormwater feature	Stormwater detention pond created in uplands under an NPDES permit, and maintained.	Alison
Wilmington	SAW-2012-01650	1/27/2015	Wake Forest, NC	35.9455	-78.5078	Yes	Wetlands directly abutting RPW	Wetlands directly abut RPW that flows to TNW	Alison
Wilmington	SAW-2015-00019	1/5/2015	Snow Camp, NC	35.854104	-79.384634	Yes	Discrete surface connection - Wetlands drain into non-JD ditch which flow to RPW approximately 400 feet away	RPW, Wetlands directly abutting and adjacent but not directly abutting	Alison
Wilmington	SAW-2006-00589	11/26/2014	Hamstead, NC	34.45756	-77.602557	Yes	Directly abutting; unable to determine distance of adjacent wetlands to RPW without map	RPW, Wetlands directly abutting, and adjacent but not directly abutting	Alison
Wilmington	SAW-2014-00820	1/29/2015	McLeansville, NC	36.09786	-79.68685	Yes	Wetlands directly abutting RPW	RPW flows to TNW; wetland Wetlands directly abutting RPW impoundment	Alison
Wilmington	SAW-2007-2276-305	7/7/2014	Jefferson, NC	36.46851	-81.42637	Yes	Wetlands directly abutting RPW	RPW and wetlands directly abutting the RPW.	Alison
Wilmington	SAW-2014-00838	7/15/2014	Charlotte, NC	35.223517	-80.944165	No	Excluded ditch	Non-jurisdictional ditch, created in uplands and only transports flow after precipitation.	Alison

	Number of ORM2 Records (FY2013)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2013)	Percent Positive Jurisdiction (FY2013)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	53,968	65%			100.0%	
Wetlands	24,571	30%			100.0%	
Other Waters	4,604	6%	0.0%			
Total	83,143	100%				

	Number of ORM2 Records (FY2014)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2014)	Percent Positive Jurisdiction (FY2014)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	49,623	64%				
Wetlands	22,210	29%				
Other Waters	5,111	7%				
Total	76,944	100%				

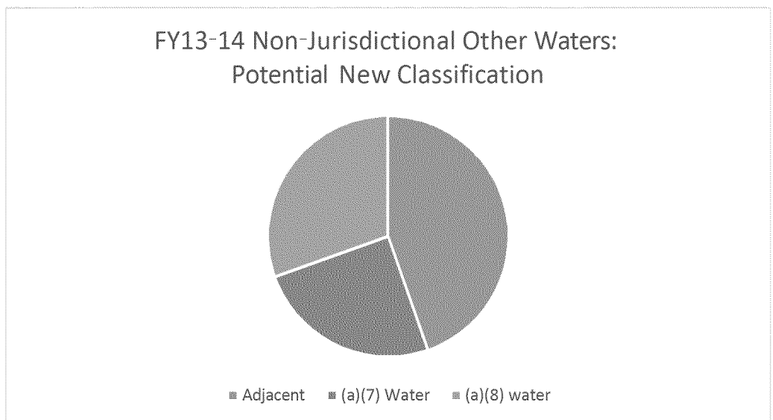
	Number of ORM2 Records (FY13-14)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY13-14)	Percent Positive Jurisdiction (FY13-14)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	103,591	65%	102,894	99.3%	100.0%	0.44%
Wetlands	46,781	29%	46,273	98.9%	100.0%	0.32%
Other Waters	9,715	6%	0	0.0%	34.5%	2.09%
Total	160,087	100%	149,166	*93.2%*	*96.0%*	2.84%

Label	A	B	C	D	E	F
Formula		A/Total(A)		C/A		(E-D)*B
				% Change Jurisdictional Input to all other cells		2.84%

Records from ORM2 FY13				% Jurisdictional in FY13	# Jurisdictional in FY13
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	7085	6%			
IMPNDMNT	594	1%			
ISOLATE	4604	4%	Other Waters	0%	0
NRPW	12133	10%	Streams	97%	11769.01
NRPWW	3221	3%	Wetlands	97%	3124.37
RPW	28397	24%	Streams	100%	28397
RPWWD	11514	10%	Wetlands	100%	11514
RPWWN	6123	5%	Wetlands	97%	5939.31
TNW	12476	11%	Streams	100%	12476
TNWRPW	962	1%	Streams	100%	962
TNWW	3713	3%	Wetlands	100%	3713
UPLAND	4733	4%		N/A	
Grand Total	117268	100%			

% Streams Jurisdictional	0.993255
% Wetlands Jurisdictional	0.988591

17% Adjacent	17%
9.50% (a)(7) Water	9.50%
11.60% (a)(8) water	11.60%



Records from ORM2 FY14				% Jurisdictional	# Jurisdictio
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	9681	9%			
IMPNDMNT	595	1%			
ISOLATE	5111	5%	Other Waters	0%	0
NRPW	11110	10%	Streams	97%	10776.7
NRPWW	2502	2%	Wetlands	97%	2426.94
RPW	26165	23%	Streams	100%	26165
RPWWD	10755	9%	Wetlands	100%	10755
RPWWN	5095	4%	Wetlands	97%	4942.15
TNW	11949	11%	Streams	100%	11949
TNWRPW	399	0%	Streams	100%	399
TNWW	3858	3%	Wetlands	100%	3858
UPLAND	4583	4%		N/A	
Grand Total	113516	100%			

% Streams Jurisdictional	0.993283
% Wetlands Jurisdictional	0.989738

	Annual Costs (FY14$ millions)		Annual Benefits (FY14$ millions)	
	Low	**High**	**Low**	**High**
CWA 402 CAFO Administration	$0.2	$0.2	$3.8	$6.6
CWA 402 CAFO Implementation	$6.1	$6.1		
CWA 402 Stormwater Administration	$0.3	$0.3	$29.0	$36.8
CWA 402 Stormwater Implementation	$29.2	$36.4		
CWA 404 Permit Application	$28.7	$49.1	$306.1	$306.1
CWA 404 Mitigation – Wetlands	$54.4	$152.3		
SUBTOTAL	**$118.8**	**$244.3**	**$338.9**	**$349.5**
CWA 311 Compliance	$12.7	$12.7	*not quantified*	
CWA 401 Administration	$0.8	$0.8	*not quantified*	
CWA 402 Pesticide General Permit Implementation	$3.3	$3.6	*not quantified*	
CWA 404 Mitigation – Streams	$22.8	$45.2	*not quantified*	
TOTAL	**$158.4**	**$306.6**	**$338.9**	**$349.5**

Permit Type	Maximum Number of 404 Permits Issued (FY09-14)	Estimated Additional Permits w/ Rule (Assuming % increase in jurisdiction)	FY13 Average Impact Per Permit (Acres)	Total Additional Impacts (Acres)
IP	4,672	133	5.94	788.15
GP	60,020	1,705	0.43	732.96
Total	64,692	1,837		1,521

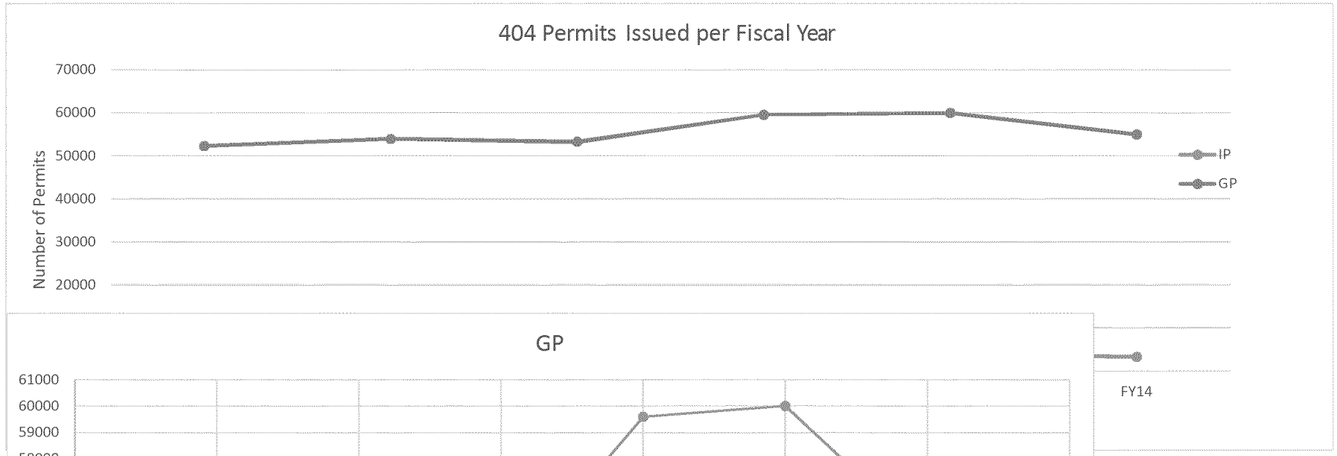
Permit Type	Additional Permits with Rule	FY13 Avg. Impact per Permit (acres)	Unit Costs from Corps NWP Analysis (2014$)	Unit Costs from SZ Study (2014$)	Estimated Additional Annual Permitting Costs (2014$ millions) Low	Estimated Additional Annual Permitting Costs (2014$ millions) High
IP	133	5.94	$34,100	$62,000 plus $16,800 per acre of impact	$4.5	$8.3
GP	1,705	0.43	$14,200	$23,900 plus $13,200 per acre of impact	$24.2	$40.7
Total	1,837				$28.7	$49.1

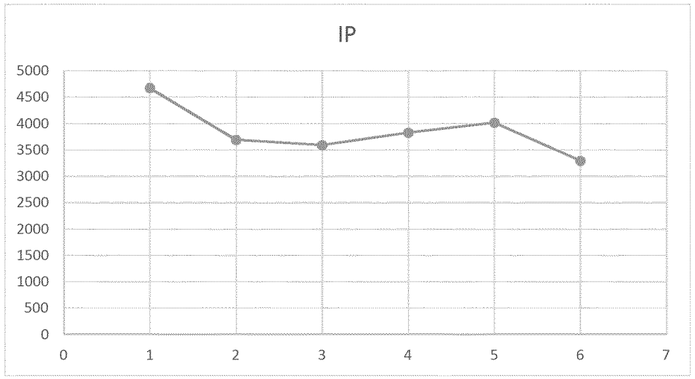
s

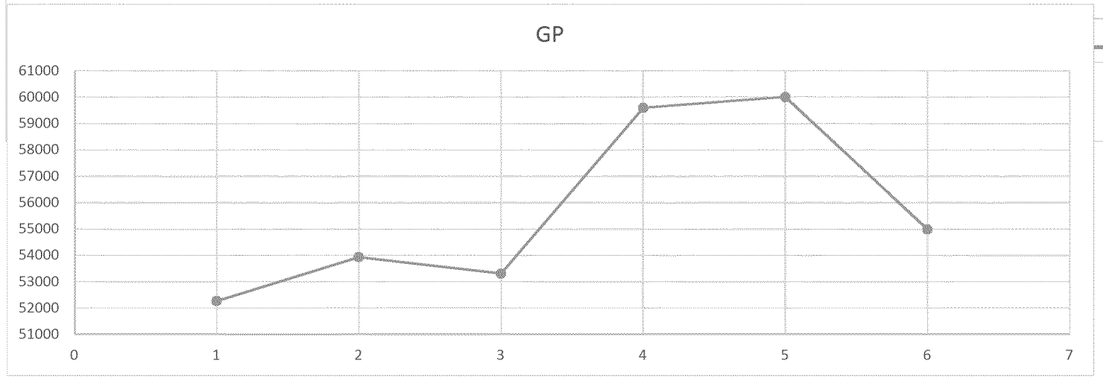
IP=SP+LOP
GP=NWP+RGP+PGP

Inflating Costs:		Corps NWP	SZ - Fixed Cost	SZ - Acre Cost
	IP	$34,104	$62,079	$16,763
	GP	$14,210	$23,971	$13,194

Fiscal Year	IP	GP	Total
FY09	4672	52287	56959
FY10	3692	53946	57638
FY11	3591	53322	56913
FY12	3834	59603	63437
FY13	4019	60020	64039
FY14	3292	54998	58290
Average	3850	55696	59546
Maximum	4672	60020	64692







Excluding temporary, restoration, conversion from the start.

Fiscal Year	IP	GP	Total
FY09	3149	28398	31547
FY10	2349	27254	29603
FY11	2928	32398	35326
FY12	3042	32347	35389
FY13	3029	30976	34005
FY14	2494	30244	32738

	FY13 JD Records								Unit Cost Per Acre Mitigated	
	Total Isolated	Total Wetland	Neg JD Wetland		New Mitigation	New Mitigation	Total Cost Low	Total Cost High	Unit Cost Low	Unit Cost High
STATE	ISO TOT	WET TOT	WET NO	% No		NEW MIT			UNIT COST LOW	UNIT COST HIGH
AK	6	215	1	0.09%	2.1	2.1	$11,392	$113,924	$5,500	$55,000
AL	42	113	7	0.63%	14.5	14.5	$152,599	$305,198	$10,524	$21,049
AR	30	80	19	0.63%	14.5	14.5	$30,520	$76,299	$2,105	$5,262
AZ	75	43	0	0.96%	22.2	22.2	$199,737	$510,440	$9,000	$23,000
CA	250	258	2	3.23%	74.6	74.6	$1,379,519	$26,099,014	$18,500	$350,000
CO	49	30	3	0.67%	15.4	15.4	$518,213	$1,619,416	$33,678	$105,245
CT	1	3	0	0.01%	0.3	0.3	$36,692	$139,209	$124,000	$470,448
DE	1	24	0	0.01%	0.3	0.3	$12,204	$12,204	$41,244	$41,244
FL	184	370	9	2.47%	57.1	57.1	$1,998,853	$12,438,577	$35,000	$217,800
GA	24	81	4	0.36%	8.3	8.3	$99,425	$1,126,815	$12,000	$136,000
IA	14	85	0	0.18%	4.1	4.1	$65,399	$65,399	$15,787	$15,787
ID	4	21	0	0.05%	1.2	1.2	$48,818	$48,818	$41,244	$41,244
IL	349	207	2	4.50%	103.9	103.9	$4,283,772	$21,418,862	$41,244	$206,221
IN	110	107	5	1.47%	34.0	34.0	$1,554,141	$3,108,282	$45,671	$91,341
KS	69	34	1	0.90%	20.7	20.7	$1,089,991	$1,089,991	$52,622	$52,622
KY	30	42	0	0.38%	8.9	8.9	$266,316	$573,468	$30,000	$64,600
LA	2	678	11	0.17%	3.8	3.8	$60,728	$248,503	$15,787	$64,600
MA	3	4	1	0.05%	1.2	1.2	$146,770	$735,230	$124,000	$621,166
MD	15	90	0	0.19%	4.4	4.4	$57,334	$302,307	$12,917	$68,109
ME	1	0	0	0.01%	0.3	0.3	$75,276	$111,625	$254,390	$377,230
MI	1	84	0	0.01%	0.3	0.3	$11,836	$23,673	$40,000	$80,000
MN	65	48	7	0.92%	21.3	21.3	$198,012	$1,628,642	$9,294	$76,443
MO	6	78	3	0.12%	2.7	2.7	$42,043	$70,071	$15,787	$26,311
MS	6	42	0	0.08%	1.8	1.8	$5,606	$46,714	$3,157	$26,311
MT	185	133	0	2.37%	54.7	54.7	$2,257,829	$2,257,829	$41,244	$41,244
NC	47	1582	0	0.60%	13.9	13.9	$359,846	$969,863	$25,874	$69,736
ND	2947	417	29	38.13%	880.6	880.6	$13,902,063	$13,902,063	$15,787	$15,787
NE	52	175	15	0.86%	19.8	19.8	$312,983	$312,983	$15,787	$15,787
NH	1	0	0	0.01%	0.3	0.3	$27,236	$37,974	$92,042	$128,330
NJ	10	68	0	0.13%	3.0	3.0	$244,090	$1,220,448	$82,489	$412,443
NM	1	0	0	0.01%	0.3	0.3	$12,457	$18,686	$42,098	$63,147
NV	368	35	3	4.75%	109.8	109.8	$6,225,810	$7,357,776	$56,711	$67,022
NY	298	378	2	3.84%	88.8	88.8	$4,438,608	$8,344,583	$50,000	$94,000
OH	594	604	4	7.66%	177.0	177.0	$2,123,430	$12,740,580	$12,000	$72,000
OK	4	20	1	0.06%	1.5	1.5	$23,357	$23,357	$15,787	$15,787
OR	38	59	1	0.50%	11.5	11.5	$628,951	$1,444,509	$54,500	$125,170
PA	118	192	1	1.52%	35.2	35.2	$422,555	$528,194	$12,000	$15,000
RI	1	0	0	0.01%	0.3	0.3	$36,692	$47,345	$124,000	$160,000
SC	230	995	69	3.83%	88.5	88.5	$2,327,910	$9,311,641	$26,311	$105,245
SD	343	104	1	4.41%	101.8	101.8	$1,606,959	$1,606,959	$15,787	$15,787
TN	39	27	0	0.50%	11.5	11.5	$288,510	$288,510	$25,000	$25,000
TX	486	654	2	6.25%	144.4	144.4	$2,166,041	$6,498,122	$15,000	$45,000
UT	72	52	5	0.99%	22.8	22.8	$1,292,149	$1,527,086	$56,711	$67,022
VA	154	318	1	1.99%	45.9	45.9	$733,850	$6,421,186	$16,000	$140,000
VT	2	1	1	0.04%	0.9	0.9	$97,649	$117,179	$110,000	$132,000
WA	7	67	1	0.10%	2.4	2.4	$82,089	$754,080	$34,677	$318,546
WI	18	203	4	0.28%	6.5	6.5	$377,578	$397,107	$58,000	$61,000
WV	214	141	9	2.86%	66.0	66.0	$1,979,619	$4,223,187	$30,000	$64,000
WY	12	4	2	0.18%	4.1	4.1	$65,399	$65,399	$15,787	$15,787
Total	**7578**	**8966**	**226**	100.00%	2309.3	**2309**	**$54,378,858**	**$152,329,326**		
						Assuming 2:1 all IPs			$41,572	$112,691 Average Costs
						2:1 half of GPs				

	2013-2014 Aquatic Resource/JD Records, ACOE					Amount of Stream Linear Feet Mitigated			Unit Cost Per Linear Foot Mitigated		Total Mitigation Cost	
	Total Streams	Neg JD Streams	% Neg JD Streams		Waters No	Baseline Mitigation	Mit Per Stream	Increased Mitigation	Low Cost	High Cost	Unit Cost Low	Unit Cost High
STATE	STR TOT	STR NO	%STR NO	STR Waters	STR	BASE MIT		MIT INC	UNIT COST LOW	UNIT COST HIGH	STR COST LOW	STR COST HIGH
AK	334	1	0.3%	1711	5	7,780.0	4.6	23.4	$1,000	$1,000	$23,363	$23,363
AL	362	4	1.1%	1855	20	202,179.8	110.2	2259.0	$380	$964	$858,379	$2,177,830
AR	213	116	54.5%	1091	594	45,876.0	92.3	54862.1	$185	$343	$10,125,521	$18,821,556
AZ	1070	709	66.3%	5482	3632	509.0	0.3	999.7	$185	$343	$184,502	$342,957
CA	490	4	0.8%	2510	20	87,846.5	35.3	723.0	$185	$343	$133,442	$248,046
CO	82	1	1.2%	420	5	1,100.0	2.7	13.6	$185	$343	$2,506	$4,659
CT	12	0	0.0%	61	0	3,720.0	60.5	0.0	$185	$343	$0	$0
DE	19	0	0.0%	97	0	1,106.0	11.4	0.0	$185	$343	$0	$0
FL	734	8	1.1%	3760	41	4,281.7	1.2	47.2	$185	$343	$8,708	$16,187
GA	25	0	0.0%	128	0	80,029.8	624.8	0.0	$878	$975	$0	$0
IA	87	1	1.1%	446	5	13,961.0	31.7	162.3	$185	$343	$29,962	$55,693
ID	38	2	5.3%	195	10	6,263.1	34.0	348.0	$185	$343	$64,219	$119,371
IL	402	27	6.7%	2060	138	54,447.0	28.3	3920.2	$185	$343	$723,522	$1,344,899
IN	133	2	1.5%	681	10	741,215.0	1,104.4	11316.3	$185	$343	$2,088,565	$3,882,274
KS	119	2	1.7%	610	10	41,786.0	69.7	714.3	$185	$343	$131,832	$245,052
KY	274	12	4.4%	1404	61	172,828.0	128.8	7915.8	$170	$396	$1,345,684	$3,134,651
LA	1288	8	0.6%	6599	41	6,970.0	1.1	43.6	$185	$343	$8,040	$14,945
MA	7	0	0.0%	36	0	0.0	0.0	0.0	$100	$343	$0	$0
MD	247	0	0.0%	1265	0	7,575.0	6.0	0.0	$294	$688	$0	$0
ME	1	0	0.0%	5	0	0.0	0.0	0.0	$185	$343	$0	$0
MI	1555	0	0.0%	7967	0	650.0	0.1	0.0	$185	$343	$0	$0
MN	73	1	1.4%	374	5	2,400.0	6.5	33.3	$185	$343	$6,152	$11,436
MO	732	2	0.3%	3750	10	22,541.0	6.0	61.8	$95	$387	$5,850	$23,900
MS	155	1	0.6%	794	5	13,319.4	16.9	86.5	$185	$343	$15,963	$29,672
MT	90	1	1.1%	461	5	70,604.0	154.8	793.3	$185	$343	$146,415	$272,159
NC	2577	2	0.1%	13202	10	31,880.4	2.4	24.8	$289	$381	$7,156	$9,434
ND	217	20	9.2%	1112	102	1,981.7	2.0	201.2	$185	$343	$37,132	$69,022
NE	77	1	1.3%	394	5	11,258.0	28.9	148.1	$185	$343	$27,340	$50,820
NH	0	0	0.0%	0	0	0.0	0.0	0.0	$185	$343	$0	$0
NJ	73	0	0.0%	374	0	13.1	0.0	0.0	$185	$343	$0	$0
NM	6	1	16.7%	31	5	0.0	0.0	0.0	$185	$343	$0	$0
NV	136	18	13.2%	697	92	645.0	1.1	98.4	$185	$343	$18,159	$33,755
NY	874	7	0.8%	4478	36	30,828.3	6.9	248.9	$310	$420	$77,160	$104,539
OH	1168	47	4.0%	5984	241	196,708.8	34.3	8247.4	$240	$450	$1,979,371	$3,711,321
OK	138	6	4.3%	707	31	22,837.2	33.8	1038.1	$185	$343	$191,587	$356,126
OR	31	0	0.0%	159	0	4,208.0	26.5	0.0	$185	$343	$0	$0
PA	460	3	0.7%	2357	15	158,268.6	67.6	1039.0	$185	$343	$191,754	$356,437
RI	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
SC	656	21	3.2%	3361	108	29,404.3	9.0	972.4	$79	$217	$76,757	$211,146
SD	71	6	8.5%	364	31	3,590.0	10.8	331.4	$185	$343	$61,161	$113,688
TN	967	4	0.4%	4954	20	16,600.0	3.4	69.0	$54	$217	$3,743	$14,972
TX	1376	20	1.5%	7050	102	395,716.3	57.0	5836.5	$80	$220	$466,922	$1,286,313
UT	49	0	0.0%	251	0	22,607.0	90.1	0.0	$185	$343	$0	$0
VA	734	0	0.0%	3760	0	449,672.6	119.6	0.0	$300	$977	$0	$0
VT	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
WA	1077	1	0.1%	5518	5	51,978.5	9.4	48.3	$185	$343	$8,916	$16,573
WI	389	2	0.5%	1993	10	1,975.0	1.0	10.2	$185	$343	$1,884	$3,502
WV	591	52	8.8%	3028	266	96,179.0	34.8	9278.9	$400	$869	$3,711,546	$8,058,999
WY	7	4	57.1%	36	20	0.0	0.0	0.0	$185	$343	$0	$0
Total	20220			103,591		3,115,340.2		111915.6			$22,763,211	$45,165,295
				103591		590.02655			$223	$412		

State	Source(s) for IWR estimates	Low Stream LF/cred	High Stream LF/cred	Low Est acres (IWR)	Hi Est Acres (IWR)	Low Stream LF/cred 2014$	High Stream LF/cred 2014$	Low Est acres (IWR) 2014$	Hi Est Acres (IWR) 2014$	Notes		LF/Credit Proposal (2010$)	LF/Credit Proposal (2010$)	LF/Credit Proposal (2014$)	LF/Credit Proposal (2014$)
AK	District survey, TCF 2013 ILF program instrument	$1,000	$55,000	$5,500	$55,000	$1,000	$1,000	$5,500	$55,000	High price is per acre of stream	AK	$170	$316	$185	$343
AL	District 2011	$350		$10,000	$20,000	$380	$964	$10,524	$21,049	2011->2014$	AL	$350	$888	$380	$964
AR	District 2011			$2,000	$5,000	$185	$343	$2,105	$5,262	2011->2014$	AR	$170	$316	$185	$343
AZ	District website			$9,000	$23,000	$185	$343	$9,000	$23,000		AZ	$170	$316	$185	$343
CA	District website, Other Bankers, District survey		$125,000	$18,500	$350,000	$185	$343	$18,500	$350,000	High price is per acre of stream	CA	$170	$316	$185	$343
CO	ELI 2007, District 2011,			$32,000	$100,000	$185	$343	$33,678	$105,245	2011->2014$	CO	$170	$316	$185	$343
CT	Composite; CT ILF Fact sheet 2013			$124,000	$470,448	$185	$343	$124,000	$470,448		CT	$170	$316	$185	$343
DE	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	DE	$170	$316	$185	$343
FL	Other Bankers; High end FL KRF ILF instrument 2013 - Estuarine resource			$35,000	$217,800	$185	$343	$35,000	$217,800	High end is non-tidal freshwater wetlands (FL KRF instrument 2013)	FL	$170	$316	$185	$343
GA	Other Bankers, District Survey, High end Georgia Land Trust ILF program instrument 2013 and application of SAS SOP	135/credit	150/credit	$12,000	$136,000	$878	$975	$12,000	$136,000	SAS SOP indicates stream compensation ratio of 6.5 credits/LF for NWPs; cost per credit *6.5 = cost/lf	GA	$106	$293	$115	$318
IA	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/MO data 2011$->2014$	IA	$170	$316	$185	$343
ID	Composite			$40,000	$40,000	$185	$343	$41,244	$41,244	IWR est based on MT data 2012$->2014$	ID	$170	$316	$185	$343
IL	District Survey, NMBA			$40,000	$200,000	$185	$343	$41,244	$206,221	2012$->2014$	IL	$170	$316	$185	$343
IN	ELI 2007			$40,000	$80,000	$185	$343	$45,671	$91,341	2007$->2014$	IN	$170	$316	$185	$343
KS	District 2011			$50,000	$50,000	$185	$343	$52,622	$52,622	2011$->2014$	KS	$170	$316	$185	$343
KY	PN, District Survey	$170	$396	$30,000	$64,600	$170	$396	$30,000	$64,600		KY	$170	$396	$185	$430
LA	District 2011			$15,000	$50,000	$185	$343	$15,787	$64,600	2011$->2014$ High end reflects updated fee schedule by LA DNR ILF for freshwater marsh restoration (Feb 2014 amendment to ILF Instrument). 64,600 from IWR verifiable spreadsheet	LA	$170	$316	$185	$343
MA	IWR based on MA ILF fact sheet May 2014	$100	$200	$124,000	$621,166	$100	$343	$124,000	$621,166	MA ILF Fact Sheet	MA	$170	$316	$185	$343
MD	ELI 2006, ELI 2007	$250		$11,000	$58,000	$293.57	$688	$12,917	$68,109	Assumed all 2006$->2014$	MD	$250	$634	$271	$688
ME	ME NRCP ILF rates 2013-2015			$254,390	$377,230	$185	$343	$254,390	$377,230	High end includes non-tidal wetland in coastal watersheds (ME NRCP 2013 ILF Fact Sheet	ME	$170	$316	$185	$343
MI	Composite			$40,000	$80,000	$185	$343	$40,000	$80,000	IWR est based on WI/IN	MI	$170	$316	$185	$343
MN	State, 2014 Fee & sales data -			$9,294	$76,443	$185	$343	$9,294	$76,443		MN	$170	$316	$185	$343
MO	District 2011	$90	$387	$15,000	$25,000	$95	$387	$15,787	$26,311	2011$->2014 $ high stream value MO SSTF ILF Instrument 2013 & MO Stream assessment method	MO	$90	$200	$98	$217
MS	District 2011, NMBA			$3,000	$25,000	$185	$343	$3,157	$26,311	Assumed all 2011$->2014$	MS	$170	$316	$185	$343
MT	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	MT	$170	$316	$185	$343
NC	Non estuarine resource rates, NC EEP fee schedule 1 July 2014	$289	$381	$25,874	$69,736	$289	$381	$25,874	$69,736		NC	$256	$338	$278	$367
ND	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	ND	$170	$316	$185	$343
NE	District 2011			$15,000	$15,000	$185	$343	$15,787	$15,787	2011$->2014$	NE	$170	$316	$185	$343
NH	State, ILF,NH ARM Calculator 2013			$92,042	$128,330	$185	$343	$92,042	$128,330	NH ARM Calculator for Forested wetlands - 2014	NH	$170	$316	$185	$343
NJ	NMBA, Other			$80,000	$400,000	$185	$343	$82,489	$412,443	2012$->2014$	NJ	$170	$316	$185	$343
NM	Composite			$40,000	$60,000	$185	$343	$42,098	$63,147	IWR est based on CO (Eastern front) 2011$->2014$	NM	$170	$316	$185	$343
NV	Composite			$55,000	$65,000	$185	$343	$56,711	$67,022	IWR estimate based on UT data 2012$->2014$	NV	$170	$316	$185	$343
NY	District 2011, Susquehanna Headwaters Basin ILF Program Instrument 2013	$310	$420	$50,000	$91,580	$310	$420	$50,000	$94,000	Does not include estuarine resource prices. $94K from IWR verifiable spreadsheet	NY	$170	$316	$185	$343
OK	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	OH	$170	$316	$185	$343
OH	Other Bankers, District Survey, ILF Rates			$12,000	$50,000	$240	$450	$12,000	$72,000	$72,000 from IWR verifiable spreadsheet	OK	$170	$316	$185	$343
OR	OR DSL ILF Payment calculator 2014-2015	$42,339	$81,599	$54,500	$125,000	$185	$343	$54,500	$125,170	High-end is non-tidal wetland s using OR DSL Calculator, stream prices are calculated per acre of stream (OHW width * length). 125,170 from IWR verifiable spreadsheet	OR	$170	$316	$185	$343
PA	ELI 2007, ILF, State			$12,000	$15,000	$185	$343	$12,000	$15,000		PA	$170	$316	$185	$343
RI	Composite			$124,000	$160,000	$185	$343	$124,000	$160,000	IWR ave based on ME, NH, VT data	RI	$170	$316	$185	$343
SC	District 2011	$75	$200	$25,000	$100,000	$79	$217	$26,311	$105,245	2011$->2014$	SC	$75	$200	$81	$217
SD	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	SD	$170	$316	$185	$343
TN	ELI 2006, District Survey, Base fee from TN WF ILF program 2011	$50	$200	$25,000	$25,000	$54	$217	$25,000	$25,000		TN	$50	$200	$54	$217
TX	District Survey	$80		$15,000	$45,000	$80	$220	$15,000	$45,000		TX	$80	$203	$87	$220
UT	Other Bankers			$55,000	$65,000	$185	$343	$56,711	$67,022	2012$->2014$	UT	$170	$316	$185	$343
VA	District website, Other	$300	$900	$16,000	$140,000	$300	$977	$16,000	$140,000	Does not include estuarine resource prices; High end wetland from bankers	VA	$300	$900	$326	$977
VT	ILF			$110,000	$132,000	$185	$343	$110,000	$132,000		VT	$170	$316	$185	$343
WA	NMBA, District 2011, King County Mit. Reserves Program Instrument 2011			$32,949	$302,672	$185	$343	$34,677	$318,546	2011$->2014$	WA	$170	$316	$185	$343
WI	WI Wetland Cons Trust ILF Instrument 2014			$58,000	$61,000	$185	$343	$58,000	$61,000		WI	$170	$316	$185	$343
WV	District 2011, NMBA, WV DEP ILF Revenue & expenses through 2014	$400	$800	$30,000	$64,000	$400	$869	$30,000	$64,000	ILF/Bank costs	WV	$400	$800	$434	$869
WY	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/CO data 2011$ ->2014$	WY	$170	$316	$185	$343
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State	Increase in Wetland Mitigation (Acres)	Per Acre Unit Cost of Wetlands Mitigation		Increase in Stream Mitigation (Linear Feet)	Per Linear Foot Unit Cost of Stream Mitigation	
		Low	High		Low	High
AK	2.1	$5,500	$55,000	23	$1,000	$1,000
AL	14.5	$10,524	$21,049	2,259	$380	$964
AR	14.5	$2,105	$5,262	54,862	$185	$343
AZ	22.2	$9,000	$23,000	1,000	$185	$343
CA	74.6	$18,500	$350,000	723	$185	$343
CO	15.4	$33,678	$105,245	14	$185	$343
CT	0.3	$124,000	$470,448	-	$185	$343
DE	0.3	$41,244	$41,244	-	$185	$343
FL	57.1	$35,000	$217,800	47	$185	$343
GA	8.3	$12,000	$136,000	-	$878	$975
IA	4.1	$15,787	$15,787	162	$185	$343
ID	1.2	$41,244	$41,244	348	$185	$343
IL	103.9	$41,244	$206,221	3,920	$185	$343
IN	34.0	$45,671	$91,341	11,316	$185	$343
KS	20.7	$52,622	$52,622	714	$185	$343
KY	8.9	$30,000	$64,600	7,916	$170	$396
LA	3.8	$15,787	$64,600	44	$185	$343
MA	1.2	$124,000	$621,166	-	$100	$343
MD	4.4	$12,917	$68,109	-	$294	$688
ME	0.3	$254,390	$377,230	-	$185	$343
MI	0.3	$40,000	$80,000	-	$185	$343
MN	21.3	$9,294	$76,443	33	$185	$343
MO	2.7	$15,787	$26,311	62	$95	$387
MS	1.8	$3,157	$26,311	86	$185	$343
MT	54.7	$41,244	$41,244	793	$185	$343
NC	13.9	$25,874	$69,736	25	$289	$381
ND	880.6	$15,787	$15,787	201	$185	$343
NE	19.8	$15,787	$15,787	148	$185	$343
NH	0.3	$92,042	$128,330	-	$185	$343
NJ	3.0	$82,489	$412,443	-	$185	$343
NM	0.3	$42,098	$63,147	-	$185	$343
NV	109.8	$56,711	$67,022	98	$185	$343
NY	88.8	$50,000	$94,000	249	$310	$420
OH	177.0	$12,000	$72,000	8,247	$240	$450
OK	1.5	$15,787	$15,787	1,038	$185	$343
OR	11.5	$54,500	$125,170	-	$185	$343
PA	35.2	$12,000	$15,000	1,039	$185	$343
RI	0.3	$124,000	$160,000	-	$185	$343
SC	88.5	$26,311	$105,245	972	$79	$217
SD	101.8	$15,787	$15,787	331	$185	$343
TN	11.5	$25,000	$25,000	69	$54	$217
TX	144.4	$15,000	$45,000	5,837	$80	$220
UT	22.8	$56,711	$67,022	-	$185	$343
VA	45.9	$16,000	$140,000	-	$300	$977
VT	0.9	$110,000	$132,000	-	$185	$343
WA	2.4	$34,677	$318,546	48	$185	$343
WI	6.5	$58,000	$61,000	10	$185	$343
WV	66.0	$30,000	$64,000	9,279	$400	$869
WY	4.1	$15,787	$15,787	-	$185	$343
Total	**2,309**			**111,916**		

Position	Occupational Code[1]	Mean Hourly Wage[1]	Benefits Adjustment Factor[3]	Year Adjustment[4]	Total Hourly Adjusted Wage
Private Industry					
Environmental Scientist	19-2041	$35.89	1.3	1.03	$47.96
Environmental Engineer	17-2081	$41.74			$55.77
Administrative Assistant	43-6011	$27.32			$36.51
Lawyer	23-1011	$66.41			$88.74
Economist	19-3011	$50.54			$67.53
Local Government					
Environmental Scientist	19-2041	$30.27	1.35	1.02	$41.88
Environmental Engineer	17-2081	$37.58			$51.99
Administrative Assistant	43-6011	$25.09			$34.71
Lawyer	23-1011	$46.13			$63.82
Economist	19-3011	$36.35			$50.29
State Government					
Environmental Scientist	19-2041	$28.50	1.35	1.02	$39.43
Environmental Engineer	17-2081	$35.26			$48.78
Administrative Assistant	43-6011	$21.42			$29.63
Lawyer	23-1011	$40.19			$55.60
Economist	19-3011	$30.78			$42.58
Federal Government					
Environmental Scientist	19-2041	$46.93	1.31	1.03	$63.18
Environmental Engineer	17-2081	$46.91			$63.16
Administrative Assistant	43-6011	$27.32			$36.79
Lawyer	23-1011	$62.87			$84.65
Economist	19-3011	$53.54			$72.08

1. Occupational codes and mean hourly wage from BLS (2014). Bureau of Labor Statistics (BLS), United States Department of Labor. 2014. Occupational Employment and Wages, May 2013. http://www.bls.gov/oes/current/oes_nat.htm

2. Hourly mean wage for administrative assistants working in the federal government not calculated in the May 2013 dataset. Hourly mean wage for private industry used for federal government rate.

3. Adjusted for benefits according to the Employment Cost for Employee Compensation Index for professional and related for private industry, local and state employees, and civilian workers. Average value across all three quarters of 2013. http://www.bls.gov/ncs/ect/

4. Escalated to 2014 dollars using the seasonally-adjusted Employment Cost Index for private industry (May 2013 (Q2) =118.4, 2014 Q3=121.7), state and local employees (May 2013 (Q2) =121.0, 2014 Q3=124.0), and civilian workers (May 2013 (Q2) =118.9, 2014 Q3=122.2)

FTE Amount for 401	Number of States	Total FTE	Total Costs (2014$)
0.5	25	12.5	$1,123,351
10	20	200	$17,973,613
20	5	100	$8,986,807
	Total:	312.5	$28,083,771
XX% Incremental Increase:		8.875	$797,579

797579

Average Hourly Annual Salary including benefits

$43.21	$89,868.07	$28,083,771.07	
$46.60	$96,925.43	$30,289,196.90	excluding admin assistant.

Enforcement Savings - Note this was cut from the analysis

1200 hours total

900	75% federal scientists and engineers	$56,853.00
300	25% federal lawyers	$25,393.66
		$82,246.66

402 Stormwater - $ millions

	Administrative Costs	Compliance Costs (low estimate)	Compliance Costs (high estimate)	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
1998 Values	5.3	545.0	678.7	540.5	686.0
Increment	0.2	15.5	19.3	15.4	19.5
30% Program Growth	0.2	20.1	25.1	20.0	25.3
2014 Values	0.3	29.2	36.4	29.0	36.8

Stormwater		
1998 Program Size	130000	
2011 Program Size	169000	
	1.3	Size Increase

402 CAFO - $ millions

	Administrative Costs	Compliance Costs	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
2001 Values	9.0	326.0	204.0	355.0
49% Program Size Decre	4.4	159.7	100.0	174.0
3.59% Increment	0.1	4.5	2.8	4.9
2014 Values	0.2	6.1	3.8	6.6

CAFO	0.1674	
2003 Program Size	15000	
2011 Program Size	7318	
	0.49	Size Decrease

402 Pesticide General Permit - $ millions

		Compliance Costs (low estimate)	Compliance Costs (high estimate)
2009 Values		10.18	11.22
Increment		0.29	0.32
Scale Up to Total Potential Universe		2.98	3.29
2014 Values		3.29	3.63

Original Universe	35,376
Total Potential Univers	365000
Size Increase	10.31773

311 Oil Spill Prevention Plans - Costs

Weighted Average Unit (	2010$ from Prop	2014$	
Production (35% of facilities)	9,128	$9,910	$3,468,485.95
Storage (65% of facilities)	13,038	$14,155	$9,200,694.22
			$12,669,180.17

2010$ from Proposal	
9,128	9910
13,038	14155

							Horizon (years)	50	Horizon (years)						
							0.03	0.07	20						
Study (Year)	Acres	Sample Size	WTP Value from Study	WTP Value from Study Inflated to 2010$	WTP Value from Study Inflated to 2014$	Annual Value	NPV Over 50-Year Horizon (per household) 2014$		Annual WTP (per household) 2014$		One-Time WTP per household per acre 2014$		Annual HH WTP Per Acre 2014$		NWI Wetland Type
							3%	7%	3%	7%	3%	7%	3%	7%	
Emergent Wetlands															
Johnson and Linder (1986)	1,307,187	705	$289.90 (1986$)	$576.77	$626.18	No	$626.18	$626.18	$42.09	$59.11	$0.0005	$0.0005	$0.00003	$0.00005	Emergent
Loomis et al. (1991) 1	85,000	803	154 (1991$)	$246.55	$267.68	Yes	$6,887.22	$3,694.12	$267.68	$267.68	$0.0810	$0.0435	$0.00315	$0.00315	Emergent
Loomis et al. (1991) 2	125000	803	254 (1991$)	$406.65	$441.49	Yes	$11,359.43	$6,092.89	$441.49	$441.49	$0.0909	$0.0487	$0.00353	$0.00353	Emergent
Azevedo et al. (2000) 1	7000	1045	$10 (2000$)	$12.66	$13.75	No	$13.75	$13.75	$0.92	$1.30	$0.0020	$0.0020	$0.00013	$0.00019	Emergent
Azevedo et al. (2000) 2	32345	2094	$25(2000$)	$31.66	$34.37	No	$34.37	$34.37	$2.31	$3.24	$0.0011	$0.0011	$0.00007	$0.00010	Emergent
Roberts and Leitch (1997) 1	5000	575	$6.33 (1997$)	$8.60	$9.34	Yes	$240.23	$128.85	$9.34	$9.34	$0.0480	$0.0258	$0.00187	$0.00187	Emergent
Poor (1999)	41000	952	$21.05 (1996$)	$29.25	$31.76	Yes	$817.20	$438.32	$31.76	$31.76	$0.0199	$0.0107	$0.00077	$0.00077	Emergent
Mullarky and Bishop (1999) 1	110	117	$13.68(1999$)	$17.91	$19.44	Yes	$500.16	$268.27	$19.44	$19.44	$4.5469	$2.4389	$0.17672	$0.17672	Emergent
Mullarky and Bishop (1999) 2	110	117	$24.07 (1999$)		$34.20	Yes	$880.04	$472.03	$34.20	$34.20	$8.0003	$4.2912	$0.31094	$0.31094	
Forested															
Lant and Tobin (1989) 1	2109	7	24.249 (1989$)	$42.71	$46.30	Yes	$1,191.17	$638.91	$46.30	$46.30	$0.5648	$0.3029	$0.02195	$0.02195	Forested
Lant and Tobin (1989) 2	1108	16	54.5916 (1989$)	$96.00	$104.22	Yes	$2,681.66	$1,438.37	$104.22	$104.22	$2.4203	$1.2982	$0.09407	$0.09407	Forested
Blomquist and Whitehead (1998) 1	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 2	500	95		$6.14	$6.67	Yes	$171.51	$92.00	$6.67	$6.67	$0.3430	$0.1840	$0.01333	$0.01333	Forested
Blomquist and Whitehead (1998) 3	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 4	500	95		$18.70	$20.30	Yes	$522.36	$280.18	$20.30	$20.30	$1.0447	$0.5604	$0.04060	$0.04060	Forested
Dillman et al (1993) 1	2500	505	$16.74 (1992$)	$26.02	$28.25	No	$28.25	$28.25	$1.90	$2.67	$0.0113	$0.0113	$0.00076	$0.00107	Forested
Whitehead and Blomquist (1991) 1	5000	63	$10.90 (1989$)	$19.17	$20.81	Yes	$535.43	$287.19	$20.81	$20.81	$0.1071	$0.0574	$0.00416	$0.00416	Forested
Whitehead and Blomquist (1991) 2	5000	63	$7.35 (1989$)	$12.93	$14.03	Yes	$361.05	$193.66	$14.03	$14.03	$0.0722	$0.0387	$0.00281	$0.00281	Forested
Whitehead and Blomquist (1991) 3	5000	80	$5.09 (1989$)	$8.95	$9.72	Yes	$250.03	$134.11	$9.72	$9.72	$0.0500	$0.0268	$0.00194	$0.00194	Forested
Whitehead and Blomquist (1991) 4	5000	80	$3.75 (1989$)	$6.59	$12.58	Yes	$323.72	$173.63	$12.58	$12.58	$0.0647	$0.0347	$0.00252	$0.00252	Forested
Whitehead and Blomquist (1991) 5	5000	72	$16.61 (1989$)	$29.21	$31.71	Yes	$815.92	$437.64	$31.71	$31.71	$0.1632	$0.0875	$0.00634	$0.00634	Forested
Whitehead and Blomquist (1991) 6	5000	72	$8.13(1989$)	$14.30	$15.52	Yes	$399.36	$214.21	$15.52	$15.52	$0.0799	$0.0428	$0.00310	$0.00310	Forested

WTP - All Wetland Types - 3% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437	705	0.09509	-0.726846423
Loomis et al. (1991) 1	$0.0810	-2.5130	803	0.05415	-0.136088911
Loomis et al. (1991) 2	$0.0909	-2.3983		0.05415	-0.129876374
Azevedo et al. (2000) 1	$0.0020	-6.2328	1045	0.14095	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.8470	2094	0.28244	-1.933871391
Roberts and Leitch (1997) 1	$0.0480	-3.0356	575	0.07756	-0.235428364
Poor (1999)	$0.0199	-3.9154	952	0.12841	-0.502765067
Mullarky and Bishop (1999) 1	$4.5469	1.5145	117	0.00789	0.011949756
Mullarky and Bishop (1999) 2	$8.0003	2.0795		0.00789	0.016408123
Lant and Tobin (1989) 1	$0.5648	-0.5713	7	0.00094	-0.000539381
Lant and Tobin (1989) 2	$2.4203	0.8839	16	0.00216	0.001907485
Blomquist and Whitehead (1998) 1	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 2	$0.3430	-1.0699	95	0.01281	-0.013709794
Blomquist and Whitehead (1998) 3	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 4	$1.0447	0.0438	95	0.01281	0.000560692
Dillman et al (1993) 1	$0.0113	-4.4831	505	0.06811	-0.305362366
Whitehead and Blomquist (1991) 1	$0.1071	-2.2341	63	0.00425	-0.009492138
Whitehead and Blomquist (1991) 2	$0.0722	-2.6282		0.00425	-0.011166399
Whitehead and Blomquist (1991) 3	$0.0500	-2.9956	80	0.00540	-0.016161871
Whitehead and Blomquist (1991) 4	$0.0647	-2.7373		0.00540	-0.014768424
Whitehead and Blomquist (1991) 5	$0.1632	-1.8129	72	0.00486	-0.008802742
Whitehead and Blomquist (1991) 6	$0.0799	-2.5273		0.00486	-0.012271852
			7414		-4.9521944
				geomean	0.007067882 WTP Overall 3%

Azevedo	Year		
	0	2500	1.00
	1	2427	0.97
	2	2356	0.94
	3	2288	0.92
	4	2221	0.89
	5	2157	0.86
	6	2094	0.84
	7	2033	0.81
	8	1974	0.79
	9	1916	0.77
	10	1860	0.74
	11	1806	0.72
	12	1753	0.70
	13	1702	0.68
	14	1653	0.66
	15	1605	0.64
		32345	12.94 0.07729209 3091.683

WTP - All Wetland Types - 7% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.09509037	-0.726846423
Loomis et al. (1991) 1	$0.0435	-3.135910061	803	0.054154303	-0.169823023
Loomis et al. (1991) 2	$0.0487	-3.021190877		0.054154303	-0.163610485
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.140949555	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.28243863	-1.933871391
Roberts and Leitch (1997) 1	$0.0258	-3.658518632	575	0.077555975	-0.28373998
Poor (1999)	$0.0107	-4.538367179	952	0.128405719	-0.5827523
Mullarky and Bishop (1999) 1	$2.4389	0.891527083	117	0.007890477	0.007034574
Mullarky and Bishop (1999) 2	$4.2912	1.456558422		0.007890477	0.011492941
Lant and Tobin (1989) 1	$0.3029	-1.1942071	7	0.00094416	-0.001127522
Lant and Tobin (1989) 2	$1.2982	0.260954858	16	0.002158079	0.000563161
Blomquist and Whitehead (1998) 1	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 2	$0.1840	-1.692867001	95	0.012813596	-0.021691714
Blomquist and Whitehead (1998) 3	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 4	$0.5604	-0.579168219	95	0.012813596	-0.007421228
Dillman et al (1993) 1	$0.0113	-4.483082337	505	0.068114378	-0.305362366
Whitehead and Blomquist (1991) 1	$0.0574	-2.857043702	63	0.004248719	-0.012138775
Whitehead and Blomquist (1991) 2	$0.0387	-3.251106178		0.004248719	-0.013813035
Whitehead and Blomquist (1991) 3	$0.0268	-3.61852866	80	0.005395198	-0.01952268
Whitehead and Blomquist (1991) 4	$0.0347	-3.360253142		0.005395198	-0.018129232
Whitehead and Blomquist (1991) 5	$0.0875	-2.435801567	72	0.004855678	-0.011827469
Whitehead and Blomquist (1991) 6	$0.0428	-3.150245567		0.004855678	-0.01529658
			7414		-5.209716322
				geomean	0.005463223 WTP Overall 7%

WTP-Emergent - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	$0.0810	-2.512984276	803	0.063821332	-0.160382004
Loomis et al. (1991) 2	$0.0909	-2.398265092		0.063821332	-0.153060473
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	$0.0480	-3.035592847	575	0.091400413	-0.277454441
Poor (1999)	$0.0199	-3.915441395	952	0.151327293	-0.592513147
Mullarky and Bishop (1999) 2	$8.0003	2.079484207	117	0.009298999	0.019337121
Mullarky and Bishop (1999) 1	$4.5469	1.514452867		0.009298999	0.014082895
			6291		-5.321000828 0.004888
					WTP Emergent 3%

WTP-Emergent - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	0.000479032	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	0.043460184	-3.135910061	803	0.063821332	-0.200137957
Loomis et al. (1991) 2	0.048743137	-3.021190877		0.063821332	-0.192816426
Azevedo et al. (2000) 1	0.001963962	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	0.001062586	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	0.02577066	-3.658518632	575	0.091400413	-0.334390115
Poor (1999)	0.010690849	-4.538367179	952	0.151327293	-0.68677882
Mullarky and Bishop (1999) 2	4.291165706	1.456558422	117	0.009298999	0.013544535
Mullarky and Bishop (1999) 1	2.438851137	0.891527083		0.009298999	0.008290309
			6291		-5.563299253 0.003836
					WTP Emergent 7%

WTP Forested - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.564801286	-0.571281316	7	0.006233304	-0.00356097
Lant and Tobin (1989) 2	2.420273723	0.883880642	16	0.014247551	0.012593135
Blomquist and Whitehead (1998) 1	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 2	0.343028681	-1.069941216	95	0.084594835	-0.090511501
Blomquist and Whitehead (1998) 3	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 4	1.044729046	0.043757565	95	0.084594835	0.003701664
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.107086547	-2.234117917	63	0.028049866	-0.062666709
Whitehead and Blomquist (1991) 2	0.072209736	-2.628180393		0.028049866	-0.073720109
Whitehead and Blomquist (1991) 3	0.05000647	-2.995602876	80	0.035618878	-0.106700013
Whitehead and Blomquist (1991) 4	0.064743151	-2.737327358		0.035618878	-0.097500529
Whitehead and Blomquist (1991) 5	0.163184179	-1.812875783	72	0.03205699	-0.058115341
Whitehead and Blomquist (1991) 6	0.07987281	-2.527319783		0.03205699	-0.081018266
			1123		-2.8861559 0.05579
					WTP Forested 3%

WTP Forested - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.302944063	-1.1942071	7	0.006233304	-0.007443855
Lant and Tobin (1989) 2	1.298169062	0.260954858	16	0.014247551	0.003717968
Blomquist and Whitehead (1998) 1	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 2	0.183991264	-1.692867001	95	0.084594835	-0.143207805
Blomquist and Whitehead (1998) 3	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 4	0.560364273	-0.579168219	95	0.084594835	-0.04899464
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.057438314	-2.857043702	63	0.028049866	-0.080139694
Whitehead and Blomquist (1991) 2	0.03873134	-3.251106178		0.028049866	-0.091193094
Whitehead and Blomquist (1991) 3	0.026822112	-3.61852866	80	0.035618878	-0.128887931
Whitehead and Blomquist (1991) 4	0.034726467	-3.360253142		0.035618878	-0.119688447
Whitehead and Blomquist (1991) 5	0.08752756	-2.435801567	72	0.03205699	-0.078084467
Whitehead and Blomquist (1991) 6	0.042841605	-3.150245567		0.03205699	-0.100987391
			1123		-3.228959226 0.039599
					WTP Forested 7%

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.59	0.44	0.003	0.025	$7,143	$7,143
KS	1,112,096	6.59	3.76	0.032	0.210	$269,294	$269,294
NE	721,130	8.16	1.75	0.040	0.098	$99,163	$99,163
OK	1,460,450	0.14	0.60	0.001	0.034	$50,056	$50,056
Central Plains	**3,293,676**	**14.89**	**6.11**	**0.020**	**0.107**	**$418,513**	$418,513
AR	1,147,084	0.24	7.01	0.001	0.391	$450,230	$450,230
LA	1,728,360	0.59	1.33	0.003	0.074	$133,551	$133,551
MS	1,115,768	0.04	0.85	0.000	0.047	$53,105	$53,105
TN	2,493,552	0.36	5.41	0.002	0.302	$756,402	$756,402
TX	8,922,933	39.10	33.10	0.191	1.847	$18,184,660	$18,184,660
Delta and Gulf	**15,407,697**	**40.33**	**47.71**	**0.111**	**1.159**	**19,577,948**	$19,577,948
IL	4,836,972	10.22	41.71	0.050	2.327	$11,497,527	$11,497,527
IN	2,502,154	3.79	13.23	0.019	0.738	$1,892,778	$1,892,778
KY	1,719,965	0.37	4.06	0.002	0.227	$393,142	$393,142
MI	3,872,508	0.01	0.13	0.000	0.007	$29,129	$29,129
MN	2,087,227	3.08	7.57	0.015	0.422	$913,046	$913,046
MO	2,375,611	0.26	1.07	0.001	0.060	$145,145	$145,145
OH	4,603,435	17.94	70.54	0.088	3.935	$18,519,493	$18,519,493
WI	2,279,768	0.68	2.58	0.003	0.144	$335,455	$335,455
Midwest	**24,277,640**	**36.35**	**140.89**	**0.030**	**1.359**	**33,725,715**	$33,725,715
AZ	2,380,990	2.00	9.10	0.010	0.508	$1,232,080	$1,232,080
CO	1,972,868	6.43	1.27	0.031	0.071	$201,554	$201,554
ID	579,408	0.45	0.14	0.002	0.008	$5,758	$5,758
NM	791,395	0.08	0.06	0.000	0.004	$3,176	$3,176
NV	1,006,250	41.37	13.52	0.202	0.754	$962,645	$962,645
UT	877,692	10.13	1.26	0.050	0.070	$105,280	$105,280
WY	226,879	1.63	0.44	0.008	0.025	$7,412	$7,412
Mountain	**7,835,482**	**62.08**	**25.80**	**0.043**	**0.279**	**2,517,905**	$2,517,905
CT	1,371,087	0.01	0.14	0.000	0.008	$10,431	$10,431
DE	342,297	0.01	0.14	0.000	0.008	$2,648	$2,648
MA	2,547,075	0.06	0.54	0.000	0.030	$76,883	$76,883
MD	2,156,411	0.18	2.04	0.001	0.114	$247,750	$247,750
ME	557,219	0.02	0.13	0.000	0.007	$4,166	$4,166
NH	518,973	0.02	0.12	0.000	0.007	$3,677	$3,677
NJ	3,214,360	0.14	1.34	0.001	0.074	$241,725	$241,725
NY	7,317,755	7.13	37.26	0.035	2.079	$15,465,502	$15,465,502
PA	5,018,904	2.90	14.70	0.014	0.820	$4,187,772	$4,187,772
RI	413,600	0.01	0.14	0.000	0.008	$3,249	$3,249
VT	256,442	0.09	0.35	0.000	0.020	$5,141	$5,141
WV	763,831	11.96	21.03	0.058	1.173	$941,006	$941,006
Northeast	**24,477,954**	**22.53**	**77.93**	**0.015**	**0.850**	**21,189,949**	$21,189,949
CA	12,577,498	26.64	10.65	0.130	0.594	$9,110,035	$9,110,035
OR	1,518,938	4.59	1.18	0.022	0.066	$134,008	$134,008
WA	2,620,076	0.62	0.57	0.003	0.032	$90,888	$90,888
Pacific	**16,716,512**	**31.84**	**12.40**	**0.10**	**0.46**	**9,334,931**	$9,334,931
IA	1,221,576	1.00	1.08	0.005	0.060	$79,244	$79,244
MT	409,607	23.44	3.93	0.115	0.219	$136,690	$136,690
ND	281,192	433.44	6.87	2.119	0.383	$703,474	$703,474
SD	322,282	49.54	1.36	0.242	0.076	$102,423	$102,423
Prairie Potholes	**2,234,657**	**507.42**	**13.23**	**0.33**	**0.13**	**1,021,830**	$1,021,830
AL	1,883,791	0.27	6.98	0.001	0.390	$736,373	$736,373
FL	7,420,802	8.92	19.63	0.044	1.095	$8,451,423	$8,451,423
GA	3,585,584	0.23	3.92	0.001	0.219	$787,557	$787,557
NC	3,745,155	0.21	6.75	0.001	0.376	$1,413,542	$1,413,542
SC	1,801,181	2.73	41.51	0.013	2.316	$4,195,405	$4,195,405
VA	3,056,058	2.42	20.52	0.012	1.145	$3,534,158	$3,534,158
Southeast	**21,492,571**	**14.76**	**99.31**	**0.02**	**0.87**	**19,118,458**	$19,118,458

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.003	0.025	$7,143
Central Plains	3,293,676	14.9	6.1	0.020	0.107	$418,513
Delta and Gulf	15,407,697	40.3	47.7	0.111	1.159	$19,577,948
Midwest	24,277,640	36.4	140.9	0.030	1.359	$33,725,715
Mountain	7,835,482	62.1	25.8	0.043	0.279	$2,517,905
Northeast	24,477,954	22.5	77.9	0.015	0.850	$21,189,949
Pacific	16,716,512	31.8	12.4	0.100	0.458	$9,334,931
Prairie Potholes	2,234,657	507.4	13.2	0.325	0.132	$1,021,830
Southeast	21,492,571	14.8	99.3	0.018	0.871	$19,118,458
Total						$106,912,391

Regional Approach - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.003	0.025	$7,143
Central Plains	3,293,676	14.9	6.1	0.073	0.341	$1,363,367
Delta and Gulf	15,407,697	40.3	47.7	0.197	2.662	$44,045,624
Midwest	24,277,640	36.4	140.9	0.178	7.861	$195,149,143
Mountain	7,835,482	62.1	25.8	0.303	1.439	$13,656,195
Northeast	24,477,954	22.5	77.9	0.110	4.348	$109,119,337
Pacific	16,716,512	31.8	12.4	0.156	0.692	$14,162,667
Prairie Potholes	2,234,657	507.4	13.2	2.480	0.738	$7,191,438
Southeast	21,492,571	14.8	99.3	0.072	5.540	$120,628,247
Total						$505,323,160

Blended Approach - 3% Discount Rate

Region	# Households	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.003	0.025	$7,143
Central Plains	3,293,676	14.9	6.1	0.046	0.224	$890,940
Delta and Gulf	15,407,697	40.3	47.7	0.154	1.910	$31,811,786
Midwest	24,277,640	36.4	140.9	0.104	4.610	$114,437,429
Mountain	7,835,482	62.1	25.8	0.173	0.859	$8,087,050
Northeast	24,477,954	22.5	77.9	0.063	2.599	$65,154,643
Pacific	16,716,512	31.8	12.4	0.128	0.575	$11,748,799
Prairie Potholes	2,234,657	507.4	13.2	1.403	0.435	$4,106,634
Southeast	21,492,571	14.8	99.3	0.045	3.206	$69,873,352
Total		730.809	423.821			$306,117,776
		1154.630				

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.59	0.44	0.002	0.018	$5,126	$5,126
KS	1,112,096	6.59	3.76	0.025	0.149	$193,829	$193,829
NE	721,130	8.16	1.75	0.031	0.069	$72,543	$72,543
OK	1,460,450	0.14	0.60	0.001	0.024	$35,602	$35,602
Central Plains	**3,293,676**	**14.89**	**6.11**	**0.016**	**0.076**	**$301,974**	$301,974
AR	1,147,084	0.24	7.01	0.001	0.278	$319,662	$319,662
LA	1,728,360	0.59	1.33	0.002	0.053	$95,166	$95,166
MS	1,115,768	0.04	0.85	0.000	0.034	$37,708	$37,708
TN	2,493,552	0.36	5.41	0.001	0.214	$537,211	$537,211
TX	8,922,933	39.10	33.10	0.150	1.311	$13,035,034	$13,035,034
Delta and Gulf	**15,407,697**	**40.33**	**47.71**	**0.087**	**0.823**	**14,024,781**	$14,024,781
IL	4,836,972	10.22	41.71	0.039	1.652	$8,178,824	$8,178,824
IN	2,502,154	3.79	13.23	0.015	0.524	$1,346,928	$1,346,928
KY	1,719,965	0.37	4.06	0.001	0.161	$279,279	$279,279
MI	3,872,508	0.01	0.13	0.000	0.005	$20,695	$20,695
MN	2,087,227	3.08	7.57	0.012	0.300	$650,419	$650,419
MO	2,375,611	0.26	1.07	0.001	0.042	$103,246	$103,246
OH	4,603,435	17.94	70.54	0.069	2.793	$13,175,016	$13,175,016
WI	2,279,768	0.68	2.58	0.003	0.102	$238,665	$238,665
Midwest	**24,277,640**	**36.35**	**140.89**	**0.024**	**0.964**	**23,993,073**	$23,993,073
AZ	2,380,990	2.00	9.10	0.008	0.360	$876,246	$876,246
CO	1,972,868	6.43	1.27	0.025	0.050	$147,708	$147,708
ID	579,408	0.45	0.14	0.002	0.005	$4,184	$4,184
NM	791,395	0.08	0.06	0.000	0.003	$2,279	$2,279
NV	1,006,250	41.37	13.52	0.159	0.536	$698,533	$698,533
UT	877,692	10.13	1.26	0.039	0.050	$77,987	$77,987
WY	226,879	1.63	0.44	0.006	0.018	$5,396	$5,396
Mountain	**7,835,482**	**62.08**	**25.80**	**0.034**	**0.198**	**1,812,332**	$1,812,332
CT	1,371,087	0.01	0.14	0.000	0.005	$7,410	$7,410
DE	342,297	0.01	0.14	0.000	0.005	$1,881	$1,881
MA	2,547,075	0.06	0.54	0.000	0.021	$54,622	$54,622
MD	2,156,411	0.18	2.04	0.001	0.081	$175,986	$175,986
ME	557,219	0.02	0.13	0.000	0.005	$2,960	$2,960
NH	518,973	0.02	0.12	0.000	0.005	$2,614	$2,614
NJ	3,214,360	0.14	1.34	0.001	0.053	$171,741	$171,741
NY	7,317,755	7.13	37.26	0.027	1.475	$10,996,206	$10,996,206
PA	5,018,904	2.90	14.70	0.011	0.582	$2,977,736	$2,977,736
RI	413,600	0.01	0.14	0.000	0.006	$2,307	$2,307
VT	256,442	0.09	0.35	0.000	0.014	$3,658	$3,658
WV	763,831	11.96	21.03	0.046	0.833	$671,256	$671,256
Northeast	**24,477,954**	**22.53**	**77.93**	**0.012**	**0.604**	**15,068,376**	$15,068,376
CA	12,577,498	26.64	10.65	0.102	0.422	$6,588,981	$6,588,981
OR	1,518,938	4.59	1.18	0.018	0.047	$97,674	$97,674
WA	2,620,076	0.62	0.57	0.002	0.022	$65,102	$65,102
Pacific	**16,716,512**	**31.84**	**12.40**	**0.08**	**0.33**	**6,751,757**	$6,751,757
IA	1,221,576	1.00	1.08	0.004	0.043	$56,692	$56,692
MT	409,607	23.44	3.93	0.090	0.156	$100,542	$100,542
ND	281,192	433.44	6.87	1.663	0.272	$544,016	$544,016
SD	322,282	49.54	1.36	0.190	0.054	$78,554	$78,554
Prairie Potholes	**2,234,657**	**507.42**	**13.23**	**0.26**	**0.09**	**779,803**	$779,803
AL	1,883,791	0.27	6.98	0.001	0.277	$522,845	$522,845
FL	7,420,802	8.92	19.63	0.034	0.777	$6,022,921	$6,022,921
GA	3,585,584	0.23	3.92	0.001	0.155	$559,287	$559,287
NC	3,745,155	0.21	6.75	0.001	0.267	$1,003,585	$1,003,585
SC	1,801,181	2.73	41.51	0.010	1.644	$2,979,607	$2,979,607
VA	3,056,058	2.42	20.52	0.009	0.812	$2,511,175	$2,511,175
Southeast	**21,492,571**	**14.76**	**99.31**	**0.01**	**0.62**	**13,599,420**	$13,599,420

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.002	0.018	$5,126
Central Plains	3,293,676	14.9	6.1	0.016	0.076	$301,974
Delta and Gulf	15,407,697	40.3	47.7	0.087	0.823	$14,024,781
Midwest	24,277,640	36.4	140.9	0.024	0.964	$23,993,073
Mountain	7,835,482	62.1	25.8	0.034	0.198	$1,812,332
Northeast	24,477,954	22.5	77.9	0.012	0.604	$15,068,376
Pacific	16,716,512	31.8	12.4	0.079	0.325	$6,751,757
Prairie Potholes	2,234,657	507.4	13.2	0.255	0.094	$779,803
Southeast	21,492,571	14.8	99.3	0.014	0.618	$13,599,420
Total						$76,336,642

Regional Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.002	0.018	$5,126
Central Plains	3,293,676	14.9	6.1	0.057	0.242	$985,682
Delta and Gulf	15,407,697	40.3	47.7	0.155	1.889	$31,490,511
Midwest	24,277,640	36.4	140.9	0.139	5.579	$138,836,267
Mountain	7,835,482	62.1	25.8	0.238	1.022	$9,871,299
Northeast	24,477,954	22.5	77.9	0.086	3.086	$77,652,776
Pacific	16,716,512	31.8	12.4	0.122	0.491	$10,247,592
Prairie Potholes	2,234,657	507.4	13.2	1.947	0.524	$5,520,249
Southeast	21,492,571	14.8	99.3	0.057	3.932	$85,735,650
Total						$360,345,152

Blended Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.6	0.4	0.002	0.018	$5,126
Central Plains	3,293,676	14.9	6.1	0.036	0.159	$643,828
Delta and Gulf	15,407,697	40.3	47.7	0.121	1.356	$22,757,646
Midwest	24,277,640	36.4	140.9	0.082	3.272	$81,414,670
Mountain	7,835,482	62.1	25.8	0.136	0.610	$5,841,816
Northeast	24,477,954	22.5	77.9	0.049	1.845	$46,360,576
Pacific	16,716,512	31.8	12.4	0.100	0.408	$8,499,674
Prairie Potholes	2,234,657	507.4	13.2	1.101	0.309	$3,150,026
Southeast	21,492,571	14.8	99.3	0.036	2.275	$49,667,535
Total						$218,340,897

Source: U.S. Census Bureau, 2010 Census Summary File 1
http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

STATE	Households	Total New Impacted Acres by State	**Freshwater Emergent Proportions**	**Forested Emergent Proportions**	New Acreage Emergent	New Acreage Forested	Benefits by State Total Wetland Acres		3%		WTP Per HH by Type 3% Rate		7%		WTP Per HH by Type 7% rate		Overall WTP per HH		**Total Benefits Check**	
							3%	7%	Emergent	Forested	Emergent	Forested	Emergent	Forested	Emergent	Forested	3%	7%	3%	7%
AK	258,058	1.0	0.5709	0.4291	0.6	0.4	$7,143	$5,126	$746	$6,398	$0.003	$0.025	$585	$4,541	$0.002	$0.018	$0.03	$0.02	$7,143	$5,126
AL	1,883,791	7.2	0.0368	0.9632	0.3	7.0	$736,373	$522,845	$2,454	$733,919	$0.001	$0.390	$1,926	$520,920	$0.001	$0.277	$0.39	$0.28	$736,373	$522,845
AR	1,147,084	7.2	0.0324	0.9676	0.2	7.0	$450,230	$319,662	$1,318	$448,912	$0.001	$0.391	$1,034	$318,628	$0.001	$0.278	$0.39	$0.28	$450,230	$319,662
AZ	2,380,990	11.1	0.1799	0.8201	2.0	9.1	$1,232,080	$876,246	$23,232	$1,208,848	$0.010	$0.508	$18,233	$858,013	$0.008	$0.360	$0.52	$0.37	$1,232,080	$876,246
CA	12,577,498	37.3	0.7144	0.2856	26.6	10.6	$9,110,035	$6,588,981	$1,637,445	$7,472,589	$0.130	$0.594	$1,285,103	$5,303,878	$0.102	$0.422	$0.72	$0.52	$9,110,035	$6,588,981
CO	1,972,868	7.7	0.8352	0.1648	6.4	1.3	$201,554	$147,708	$61,960	$139,594	$0.031	$0.071	$48,628	$99,081	$0.025	$0.050	$0.10	$0.07	$201,554	$147,708
CT	1,371,087	0.1	0.0859	0.9141	0.0	0.1	$10,431	$7,410	$85	$10,346	$0.000	$0.008	$67	$7,343	$0.000	$0.005	$0.01	$0.01	$10,431	$7,410
DE	342,297	0.1	0.0689	0.9311	0.0	0.1	$2,648	$1,881	$17	$2,631	$0.000	$0.008	$13	$1,867	$0.000	$0.005	$0.01	$0.01	$2,648	$1,881
FL	7,420,802	28.6	0.3125	0.6875	8.9	19.6	$8,451,423	$6,022,921	$323,660	$8,127,763	$0.044	$1.095	$254,015	$5,768,906	$0.034	$0.777	$1.14	$0.81	$8,451,423	$6,022,921
GA	3,585,584	4.1	0.0544	0.9456	0.2	3.9	$787,557	$559,287	$3,952	$783,605	$0.001	$0.219	$3,101	$556,186	$0.001	$0.155	$0.22	$0.16	$787,557	$559,287
IA	1,221,576	2.1	0.4808	0.5192	1.0	1.1	$79,244	$56,692	$5,946	$73,298	$0.005	$0.060	$4,667	$52,025	$0.004	$0.043	$0.06	$0.05	$79,244	$56,692
ID	579,408	0.6	0.7661	0.2339	0.5	0.1	$5,758	$4,184	$1,284	$4,474	$0.002	$0.008	$1,008	$3,176	$0.002	$0.005	$0.01	$0.01	$5,758	$4,184
IL	4,836,972	51.9	0.1968	0.8032	10.2	41.7	$11,497,527	$8,178,824	$241,650	$11,255,878	$0.050	$2.327	$189,652	$7,989,172	$0.039	$1.652	$2.38	$1.69	$11,497,527	$8,178,824
IN	2,502,154	17.0	0.2226	0.7774	3.8	13.2	$1,892,778	$1,346,928	$46,322	$1,846,456	$0.019	$0.738	$36,354	$1,310,573	$0.015	$0.524	$0.76	$0.54	$1,892,778	$1,346,928
KS	1,112,096	10.4	0.6367	0.3633	6.6	3.8	$269,294	$193,829	$35,844	$233,450	$0.032	$0.210	$28,131	$165,697	$0.025	$0.149	$0.24	$0.17	$269,294	$193,829
KY	1,719,965	4.4	0.0843	0.9157	0.4	4.1	$393,142	$279,279	$3,147	$389,995	$0.002	$0.227	$2,470	$276,809	$0.001	$0.161	$0.23	$0.16	$393,142	$279,279
LA	1,728,360	1.9	0.3068	0.6932	0.6	1.3	$133,551	$95,166	$4,985	$128,566	$0.003	$0.074	$3,912	$91,253	$0.002	$0.053	$0.08	$0.06	$133,551	$95,166
MA	2,547,075	0.6	0.0940	0.9060	0.1	0.5	$76,883	$54,622	$693	$76,190	$0.000	$0.030	$544	$54,078	$0.000	$0.021	$0.03	$0.02	$76,883	$54,622
MD	2,156,411	2.2	0.0790	0.9210	0.2	2.0	$247,750	$175,986	$1,848	$245,901	$0.001	$0.114	$1,451	$174,535	$0.001	$0.081	$0.11	$0.08	$247,750	$175,986
ME	557,219	0.1	0.1034	0.8966	0.0	0.1	$4,166	$2,960	$42	$4,124	$0.000	$0.007	$33	$2,927	$0.000	$0.005	$0.01	$0.01	$4,166	$2,960
MI	3,872,508	0.1	0.0973	0.9027	0.0	0.1	$29,129	$20,695	$272	$28,856	$0.000	$0.007	$214	$20,482	$0.000	$0.005	$0.01	$0.01	$29,129	$20,695
MN	2,087,227	10.7	0.2893	0.7107	3.1	7.6	$913,046	$650,419	$31,441	$881,605	$0.015	$0.422	$24,675	$625,744	$0.012	$0.300	$0.44	$0.31	$913,046	$650,419
MO	2,375,611	1.3	0.1946	0.8054	0.3	1.1	$145,145	$103,246	$3,009	$142,135	$0.001	$0.060	$2,362	$100,885	$0.001	$0.042	$0.06	$0.04	$145,145	$103,246
MS	1,115,768	0.9	0.0427	0.9573	0.0	0.8	$53,105	$37,708	$207	$52,898	$0.000	$0.047	$162	$37,546	$0.000	$0.034	$0.05	$0.03	$53,105	$37,708
MT	409,607	27.4	0.8565	0.1435	23.4	3.9	$136,690	$100,542	$46,937	$89,753	$0.115	$0.219	$36,837	$63,704	$0.090	$0.156	$0.33	$0.25	$136,690	$100,542
NC	3,745,155	7.0	0.0297	0.9703	0.2	6.7	$1,413,542	$1,003,585	$3,784	$1,409,757	$0.001	$0.376	$2,970	$1,000,615	$0.001	$0.267	$0.38	$0.27	$1,413,542	$1,003,585
ND	281,192	440.3	0.9844	0.0156	433.4	6.9	$703,474	$544,016	$595,735	$107,739	$2.119	$0.383	$467,546	$76,471	$1.663	$0.272	$2.50	$1.93	$703,474	$544,016
NE	721,130	9.9	0.8235	0.1765	8.2	1.7	$99,163	$72,543	$28,774	$70,389	$0.040	$0.098	$22,582	$49,961	$0.031	$0.069	$0.14	$0.10	$99,163	$72,543
NH	518,973	0.1	0.1552	0.8448	0.0	0.1	$3,677	$2,614	$58	$3,619	$0.000	$0.007	$46	$2,569	$0.000	$0.005	$0.01	$0.01	$3,677	$2,614
NJ	3,214,360	1.5	0.0975	0.9025	0.1	1.3	$241,725	$171,741	$2,266	$239,459	$0.001	$0.074	$1,779	$169,963	$0.001	$0.053	$0.08	$0.05	$241,725	$171,741
NM	791,395	0.1	0.5631	0.4369	0.1	0.1	$3,176	$2,279	$322	$2,854	$0.000	$0.004	$253	$2,026	$0.000	$0.003	$0.00	$0.003	$3,176	$2,279
NV	1,006,250	54.9	0.7536	0.2464	41.4	13.5	$962,645	$698,533	$203,462	$759,182	$0.202	$0.754	$159,682	$538,851	$0.159	$0.536	$0.96	$0.69	$962,645	$698,533
NY	7,317,755	44.4	0.1606	0.8394	7.1	37.3	$15,465,502	$10,996,206	$254,995	$15,210,506	$0.035	$2.079	$200,126	$10,796,080	$0.027	$1.475	$2.11	$1.50	$15,465,502	$10,996,206
OH	4,603,435	88.5	0.2028	0.7972	17.9	70.5	$18,519,493	$13,175,016	$403,645	$18,115,848	$0.088	$3.935	$316,790	$12,858,227	$0.069	$2.793	$4.02	$2.86	$18,519,493	$13,175,016
OK	1,460,450	0.7	0.1858	0.8142	0.1	0.6	$50,056	$35,602	$981	$49,074	$0.001	$0.034	$770	$34,832	$0.001	$0.024	$0.03	$0.02	$50,056	$35,602
OR	1,518,938	5.8	0.7956	0.2044	4.6	1.2	$134,008	$97,674	$34,086	$99,923	$0.022	$0.066	$26,751	$70,923	$0.018	$0.047	$0.09	$0.06	$134,008	$97,674
PA	5,018,904	17.6	0.1650	0.8350	2.9	14.7	$4,187,772	$2,977,736	$71,264	$4,116,508	$0.014	$0.820	$55,930	$2,921,806	$0.011	$0.582	$0.83	$0.59	$4,187,772	$2,977,736
RI	413,600	0.1	0.0529	0.9471	0.0	0.1	$3,249	$2,307	$16	$3,234	$0.000	$0.008	$12	$2,295	$0.000	$0.006	$0.01	$0.01	$3,249	$2,307
SC	1,801,181	44.2	0.0616	0.9384	2.7	41.5	$4,195,405	$2,979,607	$24,007	$4,171,398	$0.013	$2.316	$18,841	$2,960,765	$0.010	$1.644	$2.33	$1.65	$4,195,405	$2,979,607
SD	322,282	50.9	0.9734	0.0266	49.5	1.4	$102,423	$78,554	$78,039	$24,384	$0.242	$0.076	$61,246	$17,307	$0.190	$0.054	$0.32	$0.24	$102,423	$78,554
TN	2,493,552	5.8	0.0632	0.9368	0.4	5.4	$756,402	$537,211	$4,448	$751,954	$0.002	$0.302	$3,491	$533,720	$0.001	$0.214	$0.30	$0.22	$756,402	$537,211
TX	8,922,933	72.2	0.5415	0.4585	39.1	33.1	$18,184,660	$13,035,034	$1,705,206	$16,479,454	$0.191	$1.847	$1,338,283	$11,696,751	$0.150	$1.311	$2.04	$1.46	$18,184,660	$13,035,034
UT	877,692	11.4	0.8892	0.1108	10.1	1.3	$105,280	$77,987	$43,458	$61,822	$0.050	$0.070	$34,106	$43,880	$0.039	$0.050	$0.12	$0.09	$105,280	$77,987
VA	3,056,058	22.9	0.1054	0.8946	2.4	20.5	$3,534,158	$2,511,175	$36,090	$3,498,068	$0.012	$1.145	$28,324	$2,482,851	$0.009	$0.812	$1.16	$0.82	$3,534,158	$2,511,175
VT	256,442	0.4	0.2087	0.7913	0.1	0.4	$5,141	$3,658	$116	$5,025	$0.000	$0.020	$91	$3,567	$0.000	$0.014	$0.02	$0.01	$5,141	$3,658
WA	2,620,076	1.2	0.5203	0.4797	0.6	0.6	$90,888	$65,102	$7,886	$83,002	$0.003	$0.032	$6,189	$58,913	$0.002	$0.022	$0.03	$0.02	$90,888	$65,102
WI	2,279,768	3.3	0.2079	0.7921	0.7	2.6	$335,455	$238,665	$7,542	$327,913	$0.003	$0.144	$5,919	$232,746	$0.003	$0.102	$0.15	$0.10	$335,455	$238,665
WV	763,831	33.0	0.3625	0.6375	12.0	21.0	$941,006	$671,256	$44,651	$896,355	$0.058	$1.173	$35,043	$636,213	$0.046	$0.833	$1.23	$0.88	$941,006	$671,256
WY	226,879	2.1	0.7862	0.2138	1.6	0.4	$7,412	$5,396	$1,806	$5,606	$0.008	$0.025	$1,417	$3,979	$0.006	$0.018	$0.03	$0.02	$7,412	$5,396
Total	**115,994,247**	1154.6			730.8	423.8	$106,912,391	$76,336,642	$6,031,133											

Benefits from all IPs, half of GPs			$0.00 $0.003
1154.6	1154.6		$4.02 $2.86

Region	**Households**	**Incremental Increase in Impacts (Acres)**		**Annual Benefits**							
		Emergent	**Forested**	**7%**							**3%**
Alaska	-	0.0	0.0	$0							$0
Central Plains	3,293,676	0.0	0.0	$0							$0
Delta and Gulf	15,407,697	-	-	$0							$0
Midwest	-	-	-	$0							$0
Mountain	7,835,482	-	-	$0							$0
Northeast	24,477,954	-	-	$0							$0
Pacific	16,716,512	-	-	$0							$0
Prairie Potholes	2,234,657	-	-	$0							$0
Southeast	21,492,571	-	-	$0							$0
Total				$0							$0

	NWI ESTUARINE MARINE DEEPWATER	NWI ESTUARINE MARINE WETLAND	NWI FRESHWATER EMERG WETLAND	NWI FRESHWATER FORESTSHRUB WET	NWI FRESHWATER POND	NWI OTHER	NWI LAKE	NWI RIVERINE	TOTAL	forested+emergent	Freshwater Emergent	Freshwater forested
AL	127,191.45	32,743.56	109,525.28	2,870,151.89	118,466.10	196.80	462,774.91	58,434.09	3,779,484.09	2,979,677.17	0.0368	0.9632
AK	21,893,487.57	1,937,506.22	21,850,331.84	16,420,206.51	1,113,002.35	34,833.20	4,771,491.38	1,861,458.78	69,882,317.84	38,270,538.34	0.5709	0.4291
AZ	0.00	0.00	14,465.07	65,942.87	11,227.39	1,156.62	115,408.37	78,577.09	286,777.41	80,407.94	0.1799	0.8201
AR	0.00	0.00	25,079.15	748,426.69	28,243.39	353.85	112,854.07	75,664.18	990,621.33	773,505.84	0.0324	0.9676
CA	2,255,932.43	203,764.38	885,867.03	354,187.44	79,834.16	423,863.20	1,553,494.99	284,834.80	6,041,778.42	1,240,054.46	0.7144	0.2856
CO	0.00	0.00	387,249.32	76,437.50	20,014.86	2,602.30	30,702.84	22,975.51	539,982.33	463,686.82	0.8352	0.1648
CT	478,199.85	18,789.01	12,613.21	134,281.18	34,375.44	17.48	37,854.40	14,973.58	731,104.14	146,894.39	0.0859	0.9141
DE	326,650.92	83,705.25	11,804.60	159,575.27	3,792.89	3,713.18	4,230.46	4,683.44	598,156.02	171,379.86	0.0689	0.9311
DC	0.00	0.00	11.74	192.64	32.36	0.57	345.96	4,092.97	4,676.24	204.39	0.0575	0.9425
FL	4,654,846.69	1,456,688.10	3,087,525.80	6,792,869.84	249,006.87	8,419.30	1,148,651.75	146,164.55	17,544,172.91	9,880,395.65	0.3125	0.6875
GA	210,444.76	372,675.10	255,659.35	4,441,710.33	220,025.86	2,003.46	335,672.75	71,233.28	5,909,424.89	4,697,369.69	0.0544	0.9456
HI	1,694,241.94	5,394.11	14,698.08	131,010.94	2,073.27	0.00	3,465.78	6,371.78	1,857,255.91	145,709.02	0.1009	0.8991
ID	0.00	0.00	372,787.37	113,808.69	16,517.25	2,211.15	371,244.68	72,576.40	949,145.54	486,596.06	0.7661	0.2339
IL	0.00	0.00	197,814.21	807,254.67	143,031.52	592.58	716,279.45	108,490.59	1,973,463.01	1,005,068.88	0.1968	0.8032
IN	0.00	0.00	156,754.41	547,435.45	99,074.90	1,007.75	408,274.81	56,655.32	1,269,202.64	704,189.86	0.2226	0.7774
IA	0.00	0.00	337,381.15	364,367.32	111,951.19	264.11	221,190.14	124,827.08	1,159,980.98	701,748.47	0.4808	0.5192
KS	0.00	0.00	58,705.79	33,497.88	59,087.85	1,524.27	83,002.87	45,133.43	280,952.11	92,203.68	0.6367	0.3633
KY	0.00	0.00	26,977.23	292,881.64	113,863.38	2,313.52	380,292.86	81,806.63	898,135.25	319,858.87	0.0843	0.9157
LA	3,921,389.16	1,725,050.22	993,045.42	2,243,841.83	50,380.70	906.57	413,553.75	395,662.82	9,743,830.46	3,236,887.24	0.3068	0.6932
ME	1,424,902.76	152,878.96	200,952.03	1,743,145.52	56,110.61	678.31	939,291.22	96,993.58	4,614,952.99	1,944,097.55	0.1034	0.8966
MD	329,346.18	248,926.18	33,958.30	395,833.76	17,066.28	1,360.62	22,370.82	40,585.05	1,089,447.19	429,792.06	0.0790	0.9210
MA	1,146,352.17	83,121.85	39,681.74	382,303.10	27,667.58	462.74	127,450.93	21,732.40	1,828,772.51	421,984.84	0.0940	0.9060
MI	0.00	0.00	624,318.68	5,794,913.73	153,652.09	21,496.97	6,637,618.40	73,477.66	13,305,477.53	6,419,232.40	0.0973	0.9027
MN	0.00	0.00	2,928,138.43	7,193,418.06	219,297.23	456.99	3,184,385.66	95,490.32	13,621,186.68	10,121,556.48	0.2893	0.7107
MS	105,937.55	59,175.05	87,595.13	1,961,941.68	85,433.10	440.11	144,363.35	58,076.71	2,502,962.67	2,049,536.81	0.0427	0.9573
MO	0.00	0.00	180,859.15	748,430.91	264,093.89	2,920.47	317,187.05	229,760.07	1,743,251.55	929,290.06	0.1946	0.8054
MT	0.00	0.00	522,255.95	87,493.30	70,635.05	7,566.54	597,110.06	267,790.80	1,552,851.71	609,749.26	0.8565	0.1435
NE	0.00	0.00	510,352.11	109,379.83	94,897.61	8,543.51	162,354.01	147,988.79	1,033,515.87	619,731.95	0.8235	0.1765
NV	22.85	0.00	503,170.27	164,489.22	1,888.03	3,958.74	1,299,880.28	6,928.64	1,980,338.01	667,659.49	0.7536	0.2464
NH	50,552.46	10,183.30	39,203.44	213,332.30	26,036.83	42.26	167,329.44	21,060.27	527,740.30	252,535.74	0.1552	0.8448
NJ	874,766.86	212,940.14	67,314.86	623,176.00	25,916.16	3,609.54	51,377.56	29,986.69	1,889,087.81	690,490.86	0.0975	0.9025
NM	0.00	0.00	51,215.82	39,738.21	18,684.35	5,316.87	118,227.93	53,164.92	286,348.10	90,954.03	0.5631	0.4369
NY	1,947,536.85	41,143.60	219,943.89	1,149,432.16	94,086.92	22,405.84	1,214,218.51	151,357.08	4,840,124.84	1,369,376.05	0.1606	0.8394
NC	786,004.63	294,130.65	111,190.97	3,628,891.55	111,776.54	1,182.45	321,338.37	103,281.11	5,357,796.26	3,740,082.52	0.0297	0.9703
ND	0.00	0.00	2,180,889.20	34,555.22	114,822.83	2,207.82	1,177,099.70	71,634.78	3,581,209.56	2,215,444.42	0.9844	0.0156
OH	0.00	0.00	88,258.93	347,038.41	99,819.46	315.67	793,073.21	61,203.78	1,389,709.46	435,297.34	0.2028	0.7972
OK	0.00	0.00	151,120.70	662,097.16	253,612.02	10,843.57	584,596.83	192,738.30	1,855,008.59	813,217.86	0.1858	0.8142
OR	668,462.65	68,740.05	1,038,356.84	266,685.83	59,986.38	4,507.06	610,045.12	215,786.76	2,932,570.69	1,305,042.67	0.7956	0.2044
PA	647.44	55.33	59,022.77	298,702.29	61,734.03	673.00	321,019.39	174,061.55	915,915.79	357,725.06	0.1650	0.8350
RI	261,023.26	8,212.76	3,051.22	54,658.06	4,743.86	0.26	19,490.29	1,079.06	352,258.78	57,709.28	0.0529	0.9471
SC	503,477.29	385,550.94	195,939.06	2,982,784.17	97,010.62	2,180.40	369,776.55	65,444.41	4,602,163.45	3,178,723.23	0.0616	0.9384
SD	0.00	0.00	1,638,700.20	44,860.20	182,639.48	7,385.49	636,819.51	77,292.44	2,587,697.32	1,683,560.41	0.9734	0.0266
TN	0.00	0.00	49,393.15	731,540.61	88,850.19	697.83	485,110.82	128,680.42	1,484,273.02	780,933.76	0.0632	0.9368
TX	1,916,395.66	589,482.60	1,093,581.44	925,928.44	136,909.63	71,075.34	503,579.36	138,732.93	5,375,685.40	2,019,509.88	0.5415	0.4585
UT	0.00	0.00	254,135.81	31,674.16	23,771.29	650.64	1,026,447.70	29,124.68	1,365,804.28	285,809.97	0.8892	0.1108
VT	0.00	0.00	46,692.78	177,068.74	14,047.04	1,202.46	221,527.16	13,562.84	474,101.01	223,761.51	0.2087	0.7913
VA	405,186.05	319,489.63	107,645.06	914,097.46	82,997.48	2,170.30	143,998.17	150,468.68	2,126,052.82	1,021,742.51	0.1054	0.8946
WA	1,848,981.15	236,502.70	336,371.40	310,164.34	48,297.50	4,755.44	596,236.55	125,651.85	3,506,960.93	646,535.73	0.5203	0.4797
WV	0.00	0.00	13,622.84	23,959.48	16,572.06	251.40	19,638.04	92,072.08	166,115.90	37,582.32	0.3625	0.6375
WI	0.00	0.00	613,897.84	2,338,487.40	96,948.89	22,242.22	1,434,676.91	137,982.01	4,644,235.28	2,952,385.24	0.2079	0.7921
WY	0.00	0.00	702,102.84	190,955.69	59,978.49	23,105.33	389,968.38	104,269.29	1,470,380.02	893,058.52	0.7862	0.2138
GU	181,633.98	257.66	1,397.85	2,167.04	29.84	0.00	198.98	3.98	185,689.33	3,564.89	0.3921	0.6079
MP	67,448.48	1,136.97	463.61	162.27	19.78	0.00	43.11	1.44	69,275.67	625.89	0.7407	0.2593
PR	811,864.26	43,960.45	59,723.22	14,010.53	1,193.03	0.00	415.48	652.43	931,819.40	73,733.75	0.8100	0.1900
VI	235,240.80	1,142.16	17.00	109.58	118.81	0.00	137.84	0.00	236,766.19	126.58	0.1343	0.8657
US and Isla	49,128,168.10	8,593,346.92	43,552,830.56	71,185,706.99	5,185,346.71	720,686.11	35,809,188.91	6,692,734.13	220,868,008.42	114,738,537.54	0.3796	0.6204
US Only	47,831,980.58	8,546,849.68	43,491,228.88	71,169,257.56	5,183,985.25	720,686.11	35,808,393.50	6,692,076.28	219,444,457.84	114,660,486.44	0.3793	0.6207

STATE	JA	TOTAL_JDS	DELINEATE	IMPNDMN	ISOLATE	NRPW	NRPWW	RPW	RPWWD	RPWWN	TNWPRW	TNW	TNWW	UPLAND	WATER_TYPE_NULL	TOT WET	TOT ISO	WET NO	STR TOT	STR NO	
AK	N	180	0	0	6	0	0	1	0	1	0	0	0	154	19	215	6	1	334	1	AK
AK	Y	584	0	0	0	0	0	132	70	12	0	201	132	2	34						
AL	N	285	0	2	42	3	2	1	4	0	0	0	1	139	94	113	42	7	362	4	AL
AL	Y	500	0	0	0	11	15	28	43	5	4	315	43	0	33						
AR	N	360	2	1	30	5	0	111	6	13	0	0	0	178	13	80	30	19	213	116	AR
AR	Y	380	3	0	0	14	3	59	26	6	0	24	26	0	220						
AS	Y	5	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	0	4	0	American Samoa
AZ	N	834	0	0	75	709	0	0	0	0	0	0	0	50	0	43	75	0	1070	709	AZ
AZ	Y	408	2	0	0	349	0	8	5	0	0	4	38	0	2						
CA	N	377	8	10	250	3	0	0	2	0	1	0	0	61	51	258	250	2	490	4	CA
CA	Y	865	1	3	0	135	11	239	73	40	1	111	132	9	101						
CO	N	136	9	0	49	1	1	0	0	2	0	0	0	75	7	30	49	3	82	1	CO
CO	Y	130	2	1	0	21	2	48	18	4	0	12	3	1	10						
CT	Y	16	0	0	0	0	0	6	0	1	0	6	2	0	1	3	0	0	12	0	CT
DC	Y	4	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	3	0	DC
DE	N	7	0	0	0	0	0	0	0	0	0	0	0	5	2	24	0	0	19	0	DE
DE	Y	72	0	0	0	0	3	6	12	0	1	12	9	0	29						
FL	N	321	7	20	184	7	1	1	0	7	0	0	1	32	64	370	184	9	734	8	FL
FL	Y	1939	1	0	0	52	57	125	165	46	3	546	93	0	848						
GA	N	103	1	0	24	0	4	0	0	0	0	0	0	38	36	81	24	4	25	0	GA
GA	Y	146	1	2	0	5	2	9	1	29	0	11	45	1	40						
GU	Y	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	Guam
HI	N	20	0	0	0	0	0	0	0	0	0	0	0	19	0	2	0	0	142	0	HI
HI	Y	149	0	0	0	2	0	28	0	1	0	112	1	3	3						
IA	N	63	20	0	14	1	0	0	0	0	0	0	0	17	11	85	14	0	87	1	IA
IA	Y	209	1	0	0	8	4	53	66	4	0	25	11	0	37						
ID	N	64	2	0	4	0	0	2	0	0	0	0	0	49	7	21	4	0	38	2	ID
ID	Y	60	0	0	0	2	1	20	6	1	0	14	13	0	3						
IL	N	466	31	19	349	17	0	10	1	0	0	0	1	37	7	207	349	2	402	27	IL
IL	Y	714	0	0	0	12	19	230	160	4	0	133	22	1	127						
IN	N	273	0	1	110	0	0	2	1	4	0	0	0	42	114	107	110	5	133	2	IN
IN	Y	380	0	0	0	53	20	53	29	51	0	25	2	1	145						
KS	N	229	0	3	69	0	1	2	0	0	0	0	0	143	11	34	69	1	119	2	KS
KS	Y	214	0	5	0	33	2	18	12	15	0	66	4	1	58						
KY	N	271	1	0	30	8	0	4	0	0	0	0	0	221	10	42	30	0	274	12	KY
KY	Y	347	0	4	0	85	2	84	4	19	1	92	17	0	36						
LA	N	2009	0	2	2	0	0	8	9	0	0	0	2	1597	383	678	2	11	1288	8	LA
LA	Y	4278	0	22	0	55	28	412	321	22	0	813	296	32	2283						
MA	N	5	0	1	3	0	1	0	0	0	0	0	0	0	0	4	3	1	7	0	MA
MA	Y	10	0	0	0	0	1	3	1	1	0	4	0	0	0						
MD	N	16	0	0	15	0	0	0	0	0	0	0	0	3	1	90	15	0	247	0	MD
MD	Y	2550	0	1	0	15	10	105	53	10	0	127	17	0	2209						
ME	Y	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	ME
MI	N	5	0	0	0	0	0	0	0	0	0	0	0	4	0	84	0	0	1555	0	MI
MI	Y	1747	1	0	0	0	0	26	2	2	0	1529	80	0	108						
MN	N	166	11	0	65	1	0	0	2	4	0	0	1	23	60	48	65	7	73	1	MN
MN	Y	209	3	0	0	0	0	19	13	4	0	53	24	0	92						
MO	N	193	4	17	6	1	0	1	0	3	0	0	0	142	18	78	6	3	732	2	MO
MO	Y	923	0	1	0	29	20	46	4	18	0	655	33	4	114						
MP	N	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	Mariana Islands
MP	Y	3	0	0	0	0	0	0	0	0	0	2	0	0	1						
MS	N	332	0	0	6	1	0	0	0	0	0	0	0	274	51	42	6	0	155	1	MS
MS	Y	212	0	0	0	1	1	28	6	6	0	125	29	1	15						
MT	N	187	2	1	185	0	0	1	0	0	0	0	0	7	1	133	185	0	90	1	MT
MT	Y	235	0	0	0	1	12	56	104	17	0	32	0	0	3						
NC	N	253	7	1	47	1	0	1	0	0	0	0	0	105	98	1582	47	0	2577	2	NC
NC	Y	5188	8	119	0	28	12	2245	1117	195	3	299	258	10	887						
ND	N	3024	54	3	2947	15	11	2	11	2	3	0	5	14	15	417	2947	29	217	20	ND
ND	Y	679	21	6	0	19	3	73	291	27	84	21	67	0	9						
NE	N	65	0	0	52	1	0	0	0	0	0	0	15	0	0	175	52	15	77	1	NE
NE	Y	244	0	0	0	30	47	28	49	17	4	14	47	2	3						
NH	Y	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	NH
NJ	N	10	0	0	10	0	0	0	0	0	0	0	0	0	0	68	10	0	73	0	NJ
NJ	Y	153	0	0	0	1	0	3	0	0	2	67	68	0	12						
NM	N	35	0	0	1	1	0	0	0	0	0	0	0	28	5	0	1	0	6	1	NM
NM	Y	8	0	0	0	4	0	1	0	0	0	0	0	0	3						
NV	N	420	1	1	368	15	1	3	0	2	0	0	0	26	5	35	368	3	136	18	NV
NV	Y	152	0	0	0	62	5	51	16	10	0	5	1	0	0						
NY	N	345	0	2	298	0	0	7	1	1	0	0	0	29	32	378	298	2	874	7	NY
NY	Y	1486	23	1	0	20	9	443	317	33	0	404	17	0	194						
OH	N	808	57	6	594	35	1	11	3	0	1	0	0	55	81	604	594	4	1168	47	OH
OH	Y	2086	44	22	0	259	60	744	298	188	0	118	54	3	260						
OK	N	20	1	0	4	3	1	3	0	0	0	0	0	8	0	20	4	1	138	6	OK
OK	Y	157	0	3	0	66	8	53	5	4	2	11	2	0	3						
OR	N	56	7	0	38	0	1	0	0	0	0	0	0	5	5	59	38	1	31	0	OR
OR	Y	114	0	0	0	1	14	22	29	9	0	8	6	0	25						
PA	N	238	68	1	118	1	1	2	0	0	0	0	0	43	43	192	118	1	460	3	PA
PA	Y	773	55	0	0	14	5	426	104	50	0	17	32	10	21						
PR	N	6	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	29	0	Puerto Rico
PR	Y	35	2	0	0	0	0	2	0	0	0	27	0	1	3						
RI	Y	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	RI
SC	N	677	7	4	230	7	6	13	33	30	1	0	0	331	110	995	230	69	656	21	SC
SC	Y	2216	69	42	0	45	58	432	524	142	1	157	202	14	435						
SD	N	373	0	0	343	5	1	1	0	0	0	0	0	9	20	104	343	1	71	6	SD
SD	Y	176	0	0	0	25	66	23	28	1	0	17	8	0	2						
TN	N	115	0	2	39	2	0	2	0	0	0	0	0	40	30	27	39	0	967	4	TN
TN	Y	1140	0	0	0	8	1	64	6	18	0	891	2	0	150						
TX	N	958	6	1	486	18	1	2	0	0	0	0	1	380	68	654	486	2	1376	20	TX
TX	Y	2211	2	31	0	52	14	162	99	59	1	1141	480	7	158						
UT	N	91	2	1	72	0	0	0	4	0	0	0	1	12	3	52	72	5	49	0	UT
UT	Y	116	0	0	0	5	3	42	33	9	0	2	2	1	15						
VA	N	264	4	1	154	0	0	0	1	0	0	0	0	92	19	318	154	1	734	0	VA
VA	Y	1286	1	3	0	87	4	391	267	27	0	256	19	1	223						
VI	Y	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	Virgin Islands
VT	N	3	0	0	2	0	1	0	0	0	0	0	0	0	0	1	2	1	2	0	VT
VT	Y	4	0	0	0	0	0	2	0	0	0	0	0	0	2						
WA	N	14	0	0	7	0	1	1	0	0	0	0	0	1	7	67	7	1	1077	1	WA
WA	Y	1181	0	0	0	5	4	237	34	7	0	834	21	0	36						
WI	N	166	54	0	18	0	2	1	1	0	1	0	1	61	28	203	18	4	389	2	WI
WI	Y	738	42	3	0	0	3	222	140	30	26	139	26	18	88						
WV	N	407	4	9	214	34	3	16	0	6	2	0	0	115	9	141	214	9	591	52	WV
WV	Y	805	28	5	0	59	3	405	85	25	9	66	19	1	95						
WY	N	66	4	0	12	2	1	1	0	1	1	0	0	45	0	4	12	2	7	4	WY
WY	Y	6	0	0	0	0	0	3	2	0	0	0	0	0	0						
	N	620	1	1	573	16	0	0	0	0	0	0	0	30	4						
	Y	166	10	0	0	1	2	24	27	10	15	28	21	1	22						
		54359	696	384	8145	2587	576	8151	4744	1255	167	9588	2453	4870	10743				20409		
							9028												20409		

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0000SA0
Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100
Years: 1984 to 2014

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	102.9	104.9
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	106.6	108.5
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	109.1	110.1
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	112.4	114.9
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3	116.8	119.7
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	122.7	125.3
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	128.7	132.6
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	135.2	137.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	139.2	141.4
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	143.7	145.3
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	147.2	149.3
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	151.5	153.2
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9	155.8	157.9
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5	159.9	161.2
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	162.3	163.7
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	165.4	167.8
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	170.8	173.6
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	176.6	177.5
2002	177.1	177.8	178.8	179.8	179.8	179.9	180.1	180.7	181.0	181.3	181.3	180.9	179.9	178.9	180.9
2003	181.7	183.1	184.2	183.8	183.5	183.7	183.9	184.6	185.2	185.0	184.5	184.3	184.0	183.3	184.6
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	187.6	190.2
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	193.2	197.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	200.6	202.6
2007	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208.936	210.177	210.036	207.342	205.709	208.976
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212.425	210.228	215.303	214.429	216.177
2009	211.143	212.193	212.709	213.240	213.856	215.693	215.351	215.834	215.969	216.177	216.330	215.949	214.537	213.139	215.935
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179	218.056	217.535	218.576
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672	224.939	223.598	226.280
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230.221	229.601	229.594	228.850	230.338
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877	234.149	233.546	233.069	233.049	232.957	232.366	233.548
2014	233.916	234.781	236.293	237.072	237.900	238.343	238.250	237.852	238.031	237.433	236.151	234.812	236.736	236.384	237.088

Source: Bureau of Labor Statistics

Generated on: February 11, 2015 (05:56:03 PM)

	Number of ORM2 Records (FY2013)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2013)	Percent Positive Jurisdiction (FY2013)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	53,968	65%			100.0%	
Wetlands	24,571	30%			100.0%	
Other Waters	4,604	6%	0.0%			
Total	83,143	100%				

	Number of ORM2 Records (FY2014)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2014)	Percent Positive Jurisdiction (FY2014)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	49,623	64%				
Wetlands	22,210	29%				
Other Waters	5,111	7%				
Total	76,944	100%				

	Number of ORM2 Records (FY13-14)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY13-14)	Percent Positive Jurisdiction (FY13-14)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	103,591	61%	102,894	99.3%	100.0%	0.41%
Wetlands	46,781	28%	46,273	98.9%	100.0%	0.30%
Other Waters	19,430	11%	0	0.0%	34.5%	3.94%
Total	169,802	100%	149,166	*87.8%*	*92.5%*	4.65%

Label	A	B	C	D	E	F
Formula		A/Total(A)		C/A		(E-D)*B
				% Change Jurisdictional Input to all other cells		3.67%

Records from ORM2 FY13				% Jurisdictional in FY13	# Jurisdictional in FY13
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	7085	6%			
IMPNDMNT	594	1%			
ISOLATE	4604	4%	Other Waters	0%	0
NRPW	12133	10%	Streams	97%	11769.01
NRPWW	3221	3%	Wetlands	97%	3124.37
RPW	28397	24%	Streams	100%	28397
RPWWD	11514	10%	Wetlands	100%	11514
RPWWN	6123	5%	Wetlands	97%	5939.31
TNW	12476	11%	Streams	100%	12476
TNWRPW	962	1%	Streams	100%	962
TNWW	3713	3%	Wetlands	100%	3713
UPLAND	4733	4%		N/A	
Grand Total	117268	100%			

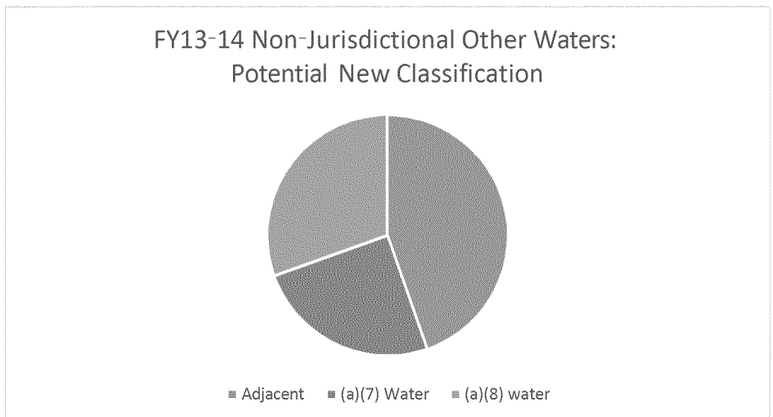
% Streams Jurisdictional	0.993255
% Wetlands Jurisdictional	0.988591

Records from ORM2 FY14				% Jurisdictional	# Jurisdictio
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	9681	9%			
IMPNDMNT	595	1%			
ISOLATE	5111	5%	Other Waters	0%	0
NRPW	11110	10%	Streams	97%	10776.7
NRPWW	2502	2%	Wetlands	97%	2426.94
RPW	26165	23%	Streams	100%	26165
RPWWD	10755	9%	Wetlands	100%	10755
RPWWN	5095	4%	Wetlands	97%	4942.15
TNW	11949	11%	Streams	100%	11949
TNWRPW	399	0%	Streams	100%	399
TNWW	3858	3%	Wetlands	100%	3858
UPLAND	4583	4%		N/A	
Grand Total	113516	100%			

% Streams Jurisdictional	0.993283
% Wetlands Jurisdictional	0.989738

17%	Adjacent
9.50%	(a)(7) Water
11.60%	(a)(8) water

17%
9.50%
11.60%



	Annual Costs (FY14$ millions)		Annual Benefits (FY14$ millions)	
	Low	**High**	**Low**	**High**
CWA 402 CAFO Administration	$0.2	$0.2	$4.9	$8.5
CWA 402 CAFO Implementation	$7.8	$7.8		
CWA 402 Stormwater Administration	$0.4	$0.4	$37.5	$47.5
CWA 402 Stormwater Implementation	$37.8	$47.0		
CWA 404 Permit Application	$37.1	$63.4	$395.6	$395.6
CWA 404 Mitigation – Wetlands	$70.3	$196.8		
SUBTOTAL	**$153.6**	**$315.7**	**$437.9**	**$451.7**
CWA 311 Compliance	$12.7	$12.7	*not quantified*	
CWA 401 Administration	$1.0	$1.0	*not quantified*	
CWA 402 Pesticide General Permit Implementation	$4.3	$4.7	*not quantified*	
CWA 404 Mitigation – Streams	$22.8	$45.2	*not quantified*	
TOTAL	**$194.3**	**$379.2**	**$437.9**	**$451.7**

Permit Type	Maximum Number of 404 Permits Issued (FY09-14)	Estimated Additional Permits w/ Rule (Assuming % increase in jurisdiction)	FY13 Average Impact Per Permit (Acres)	Total Additional Impacts (Acres)
IP	4,672	171	5.94	1,018.49
GP	60,020	2,203	0.43	947.18
Total	64,692	2,374		1,966

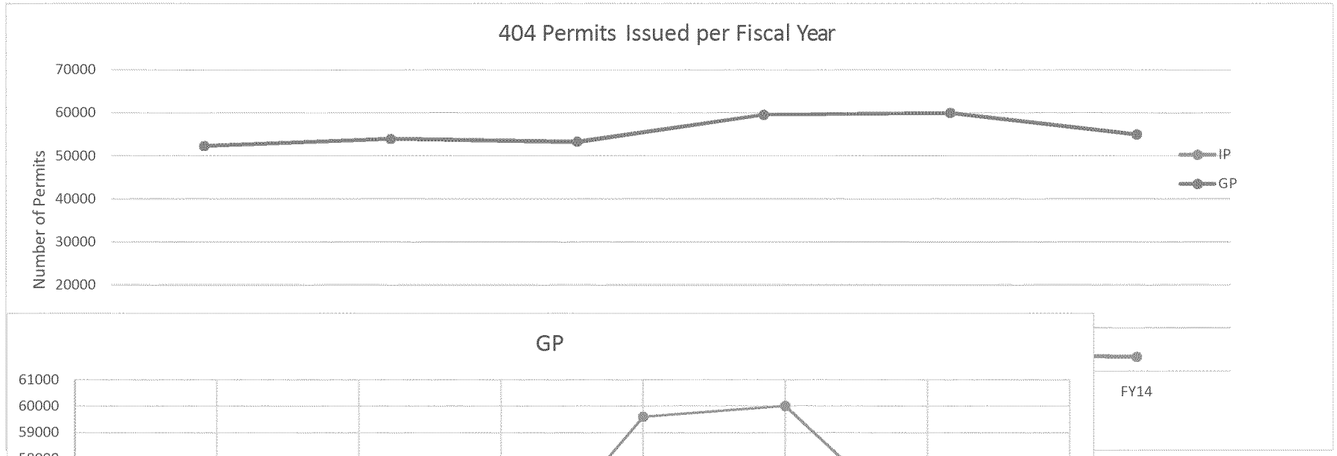
Permit Type	Additional Permits with Rule	FY13 Avg. Impact per Permit (acres)	Unit Costs from Corps NWP Analysis (2014$)	Unit Costs from SZ Study (2014$)	Estimated Additional Annual Permitting Costs (2014$ millions) Low	Estimated Additional Annual Permitting Costs (2014$ millions) High
IP	171	5.94	$34,100	$62,000 plus $16,800 per acre of impact	$5.8	$10.7
GP	2,203	0.43	$14,200	$23,900 plus $13,200 per acre of impact	$31.3	$52.7
Total	2,374				$37.1	$63.4

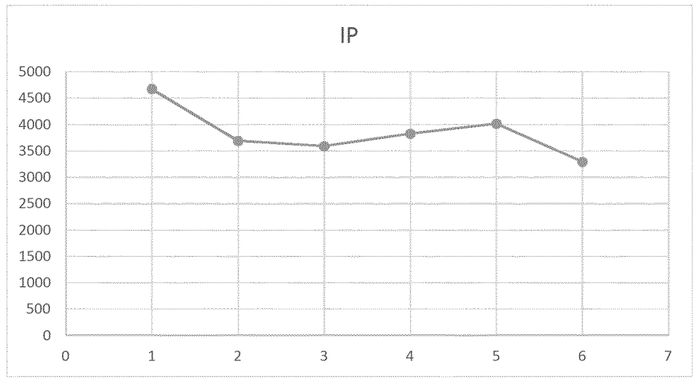
s

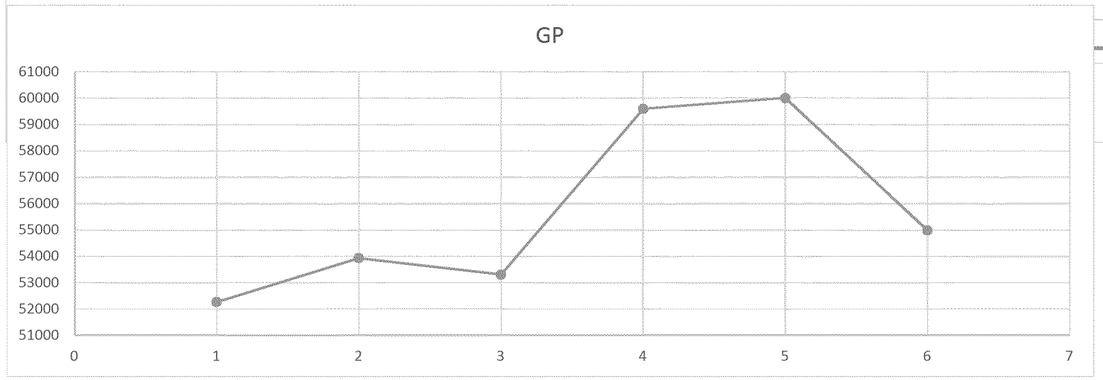
IP=SP+LOP
GP=NWP+RGP+PGP

Inflating Costs:		Corps NWP	SZ - Fixed Cost	SZ - Acre Cost
	IP	$34,104	$62,079	$16,763
	GP	$14,210	$23,971	$13,194

Fiscal Year	IP	GP	Total
FY09	4672	52287	56959
FY10	3692	53946	57638
FY11	3591	53322	56913
FY12	3834	59603	63437
FY13	4019	60020	64039
FY14	3292	54998	58290
Average	3850	55696	59546
Maximum	4672	60020	64692







Excluding temporary, restoration, conversion from the start.

Fiscal Year	IP	GP	Total
FY09	3149	28398	31547
FY10	2349	27254	29603
FY11	2928	32398	35326
FY12	3042	32347	35389
FY13	3029	30976	34005
FY14	2494	30244	32738

	FY13 JD Records								Unit Cost Per Acre Mitigated	
	Total Isolated	Total Wetland	Neg JD Wetland		New Mitigation	New Mitigation	Total Cost Low	Total Cost High	Unit Cost Low	Unit Cost High
STATE	ISO TOT	WET TOT	WET NO	% No		NEW MIT			UNIT COST LOW	UNIT COST HIGH
AK	6	215	1	0.09%	2.7	2.7	$14,722	$147,219	$5,500	$55,000
AL	42	113	7	0.63%	18.7	18.7	$197,196	$394,393	$10,524	$21,049
AR	30	80	19	0.63%	18.7	18.7	$39,439	$98,598	$2,105	$5,262
AZ	75	43	0	0.96%	28.7	28.7	$258,111	$659,618	$9,000	$23,000
CA	250	258	2	3.23%	96.4	96.4	$1,782,689	$33,726,542	$18,500	$350,000
CO	49	30	3	0.67%	19.9	19.9	$669,663	$2,092,696	$33,678	$105,245
CT	1	3	0	0.01%	0.4	0.4	$47,416	$179,893	$124,000	$470,448
DE	1	24	0	0.01%	0.4	0.4	$15,771	$15,771	$41,244	$41,244
FL	184	370	9	2.47%	73.8	73.8	$2,583,025	$16,073,795	$35,000	$217,800
GA	24	81	4	0.36%	10.7	10.7	$128,482	$1,456,130	$12,000	$136,000
IA	14	85	0	0.18%	5.4	5.4	$84,513	$84,513	$15,787	$15,787
ID	4	21	0	0.05%	1.5	1.5	$63,085	$63,085	$41,244	$41,244
IL	349	207	2	4.50%	134.2	134.2	$5,535,720	$27,678,600	$41,244	$206,221
IN	110	107	5	1.47%	44.0	44.0	$2,008,344	$4,016,688	$45,671	$91,341
KS	69	34	1	0.90%	26.8	26.8	$1,408,545	$1,408,545	$52,622	$52,622
KY	30	42	0	0.38%	11.5	11.5	$344,148	$741,066	$30,000	$64,600
LA	2	678	11	0.17%	5.0	5.0	$78,476	$321,129	$15,787	$64,600
MA	3	4	1	0.05%	1.5	1.5	$189,664	$950,103	$124,000	$621,166
MD	15	90	0	0.19%	5.7	5.7	$74,090	$390,658	$12,917	$68,109
ME	1	0	0	0.01%	0.4	0.4	$97,275	$144,248	$254,390	$377,230
MI	1	84	0	0.01%	0.4	0.4	$15,295	$30,591	$40,000	$80,000
MN	65	48	7	0.92%	27.5	27.5	$255,881	$2,104,619	$9,294	$76,443
MO	6	78	3	0.12%	3.4	3.4	$54,330	$90,549	$15,787	$26,311
MS	6	42	0	0.08%	2.3	2.3	$7,244	$60,366	$3,157	$26,311
MT	185	133	0	2.37%	70.7	70.7	$2,917,687	$2,917,687	$41,244	$41,244
NC	47	1582	0	0.60%	18.0	18.0	$465,013	$1,253,309	$25,874	$69,736
ND	2947	417	29	38.13%	1138.0	1138.0	$17,964,989	$17,964,989	$15,787	$15,787
NE	52	175	15	0.86%	25.6	25.6	$404,454	$404,454	$15,787	$15,787
NH	1	0	0	0.01%	0.4	0.4	$35,196	$49,072	$92,042	$128,330
NJ	10	68	0	0.13%	3.8	3.8	$315,426	$1,577,128	$82,489	$412,443
NM	1	0	0	0.01%	0.4	0.4	$16,098	$24,146	$42,098	$63,147
NV	368	35	3	4.75%	141.9	141.9	$8,045,325	$9,508,112	$56,711	$67,022
NY	298	378	2	3.84%	114.7	114.7	$5,735,807	$10,783,316	$50,000	$94,000
OH	594	604	4	7.66%	228.7	228.7	$2,744,010	$16,464,059	$12,000	$72,000
OK	4	20	1	0.06%	1.9	1.9	$30,183	$30,183	$15,787	$15,787
OR	38	59	1	0.50%	14.9	14.9	$812,764	$1,866,672	$54,500	$125,170
PA	118	192	1	1.52%	45.5	45.5	$546,049	$682,561	$12,000	$15,000
RI	1	0	0	0.01%	0.4	0.4	$47,416	$61,182	$124,000	$160,000
SC	230	995	69	3.83%	114.3	114.3	$3,008,250	$12,033,001	$26,311	$105,245
SD	343	104	1	4.41%	131.5	131.5	$2,076,598	$2,076,598	$15,787	$15,787
TN	39	27	0	0.50%	14.9	14.9	$372,827	$372,827	$25,000	$25,000
TX	486	654	2	6.25%	186.6	186.6	$2,799,074	$8,397,221	$15,000	$45,000
UT	72	52	5	0.99%	29.4	29.4	$1,669,784	$1,973,382	$56,711	$67,022
VA	154	318	1	1.99%	59.3	59.3	$948,320	$8,297,800	$16,000	$140,000
VT	2	1	1	0.04%	1.1	1.1	$126,188	$151,425	$110,000	$132,000
WA	7	67	1	0.10%	3.1	3.1	$106,080	$974,462	$34,677	$318,546
WI	18	203	4	0.28%	8.4	8.4	$487,926	$513,163	$58,000	$61,000
WV	214	141	9	2.86%	85.3	85.3	$2,558,170	$5,457,429	$30,000	$64,000
WY	12	4	2	0.18%	5.4	5.4	$84,513	$84,513	$15,787	$15,787
Total	**7578**	**8966**	**226**	100.00%	2984.1	**2984**	**$70,271,271**	**$196,848,108**		

Assuming 2:1 all IPs $41,572 $112,691 Average Costs
2:1 half of GPs

	2013-2014 Aquatic Resource/JD Records, ACOE					Amount of Stream Linear Feet Mitigated			Unit Cost Per Linear Foot Mitigated		Total Mitigation Cost	
	Total Streams	Neg JD Streams	% Neg JD Streams		Waters No	Baseline Mitigation	Mit Per Stream	Increased Mitigation	Low Cost	High Cost	Unit Cost Low	Unit Cost High
STATE	STR TOT	STR NO	%STR NO	STR Waters	STR	BASE MIT		MIT INC	UNIT COST LOW	UNIT COST HIGH	STR COST LOW	STR COST HIGH
AK	334	1	0.3%	1711	5	7,780.0	4.6	23.4	$1,000	$1,000	$23,363	$23,363
AL	362	4	1.1%	1855	20	202,179.8	110.2	2259.0	$380	$964	$858,379	$2,177,830
AR	213	116	54.5%	1091	594	45,876.0	92.3	54862.1	$185	$343	$10,125,521	$18,821,556
AZ	1070	709	66.3%	5482	3632	509.0	0.3	999.7	$185	$343	$184,502	$342,957
CA	490	4	0.8%	2510	20	87,846.5	35.3	723.0	$185	$343	$133,442	$248,046
CO	82	1	1.2%	420	5	1,100.0	2.7	13.6	$185	$343	$2,506	$4,659
CT	12	0	0.0%	61	0	3,720.0	60.5	0.0	$185	$343	$0	$0
DE	19	0	0.0%	97	0	1,106.0	11.4	0.0	$185	$343	$0	$0
FL	734	8	1.1%	3760	41	4,281.7	1.2	47.2	$185	$343	$8,708	$16,187
GA	25	0	0.0%	128	0	80,029.8	624.8	0.0	$878	$975	$0	$0
IA	87	1	1.1%	446	5	13,961.0	31.7	162.3	$185	$343	$29,962	$55,693
ID	38	2	5.3%	195	10	6,263.1	34.0	348.0	$185	$343	$64,219	$119,371
IL	402	27	6.7%	2060	138	54,447.0	28.3	3920.2	$185	$343	$723,522	$1,344,899
IN	133	2	1.5%	681	10	741,215.0	1,104.4	11316.3	$185	$343	$2,088,565	$3,882,274
KS	119	2	1.7%	610	10	41,786.0	69.7	714.3	$185	$343	$131,832	$245,052
KY	274	12	4.4%	1404	61	172,828.0	128.8	7915.8	$170	$396	$1,345,684	$3,134,651
LA	1288	8	0.6%	6599	41	6,970.0	1.1	43.6	$185	$343	$8,040	$14,945
MA	7	0	0.0%	36	0	0.0	0.0	0.0	$100	$343	$0	$0
MD	247	0	0.0%	1265	0	7,575.0	6.0	0.0	$294	$688	$0	$0
ME	1	0	0.0%	5	0	0.0	0.0	0.0	$185	$343	$0	$0
MI	1555	0	0.0%	7967	0	650.0	0.1	0.0	$185	$343	$0	$0
MN	73	1	1.4%	374	5	2,400.0	6.5	33.3	$185	$343	$6,152	$11,436
MO	732	2	0.3%	3750	10	22,541.0	6.0	61.8	$95	$387	$5,850	$23,900
MS	155	1	0.6%	794	5	13,319.4	16.9	86.5	$185	$343	$15,963	$29,672
MT	90	1	1.1%	461	5	70,604.0	154.8	793.3	$185	$343	$146,415	$272,159
NC	2577	2	0.1%	13202	10	31,880.4	2.4	24.8	$289	$381	$7,156	$9,434
ND	217	20	9.2%	1112	102	1,981.7	2.0	201.2	$185	$343	$37,132	$69,022
NE	77	1	1.3%	394	5	11,258.0	28.9	148.1	$185	$343	$27,340	$50,820
NH	0	0	0.0%	0	0	0.0	0.0	0.0	$185	$343	$0	$0
NJ	73	0	0.0%	374	0	13.1	0.0	0.0	$185	$343	$0	$0
NM	6	1	16.7%	31	5	0.0	0.0	0.0	$185	$343	$0	$0
NV	136	18	13.2%	697	92	645.0	1.1	98.4	$185	$343	$18,159	$33,755
NY	874	7	0.8%	4478	36	30,828.3	6.9	248.9	$310	$420	$77,160	$104,539
OH	1168	47	4.0%	5984	241	196,708.8	34.3	8247.4	$240	$450	$1,979,371	$3,711,321
OK	138	6	4.3%	707	31	22,837.2	33.8	1038.1	$185	$343	$191,587	$356,126
OR	31	0	0.0%	159	0	4,208.0	26.5	0.0	$185	$343	$0	$0
PA	460	3	0.7%	2357	15	158,268.6	67.6	1039.0	$185	$343	$191,754	$356,437
RI	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
SC	656	21	3.2%	3361	108	29,404.3	9.0	972.4	$79	$217	$76,757	$211,146
SD	71	6	8.5%	364	31	3,590.0	10.8	331.4	$185	$343	$61,161	$113,688
TN	967	4	0.4%	4954	20	16,600.0	3.4	69.0	$54	$217	$3,743	$14,972
TX	1376	20	1.5%	7050	102	395,716.3	57.0	5836.5	$80	$220	$466,922	$1,286,313
UT	49	0	0.0%	251	0	22,607.0	90.1	0.0	$185	$343	$0	$0
VA	734	0	0.0%	3760	0	449,672.6	119.6	0.0	$300	$977	$0	$0
VT	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
WA	1077	1	0.1%	5518	5	51,978.5	9.4	48.3	$185	$343	$8,916	$16,573
WI	389	2	0.5%	1993	10	1,975.0	1.0	10.2	$185	$343	$1,884	$3,502
WV	591	52	8.8%	3028	266	96,179.0	34.8	9278.9	$400	$869	$3,711,546	$8,058,999
WY	7	4	57.1%	36	20	0.0	0.0	0.0	$185	$343	$0	$0
Total	20220			103,591		3,115,340.2		111915.6			$22,763,211	$45,165,295
						590.02655			$223	$412		

State	Source(s) for IWR estimates	Low Stream LF/cred	High Stream LF/cred	Low Est acres (IWR)	Hi Est Acres (IWR)	Low Stream LF/cred 2014$	High Stream LF/cred 2014$	Low Est acres (IWR) 2014$	Hi Est Acres (IWR) 2014$	Notes		LF/Credit Proposal (2010$)	LF/Credit Proposal (2010$)	LF/Credit Proposal (2014$)	LF/Credit Proposal (2014$)
AK	District survey, TCF 2013 ILF program instrument	$1,000	$55,000	$5,500	$55,000	$1,000	$1,000	$5,500	$55,000	High price is per acre of stream	AK	$170	$316	$185	$343
AL	District 2011	$350		$10,000	$20,000	$380	$964	$10,524	$21,049	2011->2014$	AL	$350	$888	$380	$964
AR	District 2011			$2,000	$5,000	$185	$343	$2,105	$5,262	2011->2014$	AR	$170	$316	$185	$343
AZ	District website			$9,000	$23,000	$185	$343	$9,000	$23,000		AZ	$170	$316	$185	$343
CA	District website, Other Bankers, District survey		$125,000	$18,500	$350,000	$185	$343	$18,500	$350,000	High price is per acre of stream	CA	$170	$316	$185	$343
CO	ELI 2007, District 2011,			$32,000	$100,000	$185	$343	$33,678	$105,245	2011->2014$	CO	$170	$316	$185	$343
CT	Composite; CT ILF Fact sheet 2013			$124,000	$470,448	$185	$343	$124,000	$470,448		CT	$170	$316	$185	$343
DE	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	DE	$170	$316	$185	$343
FL	Other Bankers; High end FL KRF ILF instrument 2013 - Estuarine resource			$35,000	$217,800	$185	$343	$35,000	$217,800	High end is non-tidal freshwater wetlands (FL KRF instrument 2013)	FL	$170	$316	$185	$343
GA	Other Bankers, District Survey, High end Georgia Land Trust ILF program instrument 2013 and application of SAS SOP	135/credit	150/credit	$12,000	$136,000	$878	$975	$12,000	$136,000	SAS SOP indicates stream compensation ratio of 6.5 credits/LF for NWPs; cost per credit *6.5 = cost/lf	GA	$106	$293	$115	$318
IA	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/MO data 2011$->2014$	IA	$170	$316	$185	$343
ID	Composite			$40,000	$40,000	$185	$343	$41,244	$41,244	IWR est based on MT data 2012$->2014$	ID	$170	$316	$185	$343
IL	District Survey, NMBA			$40,000	$200,000	$185	$343	$41,244	$206,221	2012$->2014$	IL	$170	$316	$185	$343
IN	ELI 2007			$40,000	$80,000	$185	$343	$45,671	$91,341	2007$->2014$	IN	$170	$316	$185	$343
KS	District 2011			$50,000	$50,000	$185	$343	$52,622	$52,622	2011$->2014$	KS	$170	$316	$185	$343
KY	PN, District Survey	$170	$396	$30,000	$64,600	$170	$396	$30,000	$64,600		KY	$170	$396	$185	$430
LA	District 2011			$15,000	$50,000	$185	$343	$15,787	$64,600	2011$->2014$ High end reflects updated fee schedule by LA DNR ILF for freshwater marsh restoration (Feb 2014 amendment to ILF Instrument). 64,600 from IWR verifiable spreadsheet	LA	$170	$316	$185	$343
MA	IWR based on MA ILF fact sheet May 2014	$100	$200	$124,000	$621,166	$100	$343	$124,000	$621,166	MA ILF Fact Sheet	MA	$170	$316	$185	$343
MD	ELI 2006, ELI 2007	$250		$11,000	$58,000	$293.57	$688	$12,917	$68,109	Assumed all 2006$->2014$	MD	$250	$634	$271	$688
ME	ME NRCP ILF rates 2013-2015			$254,390	$377,230	$185	$343	$254,390	$377,230	High end includes non-tidal wetland in coastal watersheds (ME NRCP 2013 ILF Fact Sheet	ME	$170	$316	$185	$343
MI	Composite			$40,000	$80,000	$185	$343	$40,000	$80,000	IWR est based on WI/IN	MI	$170	$316	$185	$343
MN	State, 2014 Fee & sales data -			$9,294	$76,443	$185	$343	$9,294	$76,443		MN	$170	$316	$185	$343
MO	District 2011	$90	$387	$15,000	$25,000	$95	$387	$15,787	$26,311	2011$->2014 $ high stream value MO SSTF ILF Instrument 2013 & MO Stream assessment method	MO	$90	$200	$98	$217
MS	District 2011, NMBA			$3,000	$25,000	$185	$343	$3,157	$26,311	Assumed all 2011$->2014$	MS	$170	$316	$185	$343
MT	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	MT	$170	$316	$185	$343
NC	Non estuarine resource rates, NC EEP fee schedule 1 July 2014	$289	$381	$25,874	$69,736	$289	$381	$25,874	$69,736		NC	$256	$338	$278	$367
ND	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	ND	$170	$316	$185	$343
NE	District 2011			$15,000	$15,000	$185	$343	$15,787	$15,787	2011$->2014$	NE	$170	$316	$185	$343
NH	State, ILF,NH ARM Calculator 2013			$92,042	$128,330	$185	$343	$92,042	$128,330	NH ARM Calculator for Forested wetlands - 2014	NH	$170	$316	$185	$343
NJ	NMBA, Other			$80,000	$400,000	$185	$343	$82,489	$412,443	2012$->2014$	NJ	$170	$316	$185	$343
NM	Composite			$40,000	$60,000	$185	$343	$42,098	$63,147	IWR est based on CO (Eastern front) 2011$->2014$	NM	$170	$316	$185	$343
NV	Composite			$55,000	$65,000	$185	$343	$56,711	$67,022	IWR estimate based on UT data 2012$->2014$	NV	$170	$316	$185	$343
NY	District 2011, Susquehanna Headwaters Basin ILF Program Instrument 2013	$310	$420	$50,000	$91,580	$310	$420	$50,000	$94,000	Does not include estuarine resource prices. $94K from IWR verifiable spreadsheet	NY	$170	$316	$185	$343
OK	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	OH	$170	$316	$185	$343
OH	Other Bankers, District Survey, ILF Rates			$12,000	$50,000	$240	$450	$12,000	$72,000	$72,000 from IWR verifiable spreadsheet	OK	$170	$316	$185	$343
OR	OR DSL ILF Payment calculator 2014-2015	$42,339	$81,599	$54,500	$125,000	$185	$343	$54,500	$125,170	High-end is non-tidal wetland s using OR DSL Calculator, stream prices are calculated per acre of stream (OHW width * length). 125,170 from IWR verifiable spreadsheet	OR	$170	$316	$185	$343
PA	ELI 2007, ILF, State			$12,000	$15,000	$185	$343	$12,000	$15,000		PA	$170	$316	$185	$343
RI	Composite			$124,000	$160,000	$185	$343	$124,000	$160,000	IWR ave based on ME, NH, VT data	RI	$170	$316	$185	$343
SC	District 2011	$75	$200	$25,000	$100,000	$79	$217	$26,311	$105,245	2011$->2014$	SC	$75	$200	$81	$217
SD	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	SD	$170	$316	$185	$343
TN	ELI 2006, District Survey, Base fee from TN WF ILF program 2011	$50	$200	$25,000	$25,000	$54	$217	$25,000	$25,000		TN	$50	$200	$54	$217
TX	District Survey	$80		$15,000	$45,000	$80	$220	$15,000	$45,000		TX	$80	$203	$87	$220
UT	Other Bankers			$55,000	$65,000	$185	$343	$56,711	$67,022	2012$->2014$	UT	$170	$316	$185	$343
VA	District website, Other	$300	$900	$16,000	$140,000	$300	$977	$16,000	$140,000	Does not include estuarine resource prices; High end wetland from bankers	VA	$300	$900	$326	$977
VT	ILF			$110,000	$132,000	$185	$343	$110,000	$132,000		VT	$170	$316	$185	$343
WA	NMBA, District 2011, King County Mit. Reserves Program Instrument 2011			$32,949	$302,672	$185	$343	$34,677	$318,546	2011$->2014$	WA	$170	$316	$185	$343
WI	WI Wetland Cons Trust ILF Instrument 2014			$58,000	$61,000	$185	$343	$58,000	$61,000		WI	$170	$316	$185	$343
WV	District 2011, NMBA, WV DEP ILF Revenue & expenses through 2014	$400	$800	$30,000	$64,000	$400	$869	$30,000	$64,000	ILF/Bank costs	WV	$400	$800	$434	$869
WY	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/CO data 2011$ ->2014$	WY	$170	$316	$185	$343
GU AS VI PR MP															

State	Increase in Wetland Mitigation (Acres)	Per Acre Unit Cost of Wetlands Mitigation		Increase in Stream Mitigation (Linear Feet)	Per Linear Foot Unit Cost of Stream Mitigation	
		Low	High		Low	High
AK	2.7	$5,500	$55,000	23	$1,000	$1,000
AL	18.7	$10,524	$21,049	2,259	$380	$964
AR	18.7	$2,105	$5,262	54,862	$185	$343
AZ	28.7	$9,000	$23,000	1,000	$185	$343
CA	96.4	$18,500	$350,000	723	$185	$343
CO	19.9	$33,678	$105,245	14	$185	$343
CT	0.4	$124,000	$470,448	-	$185	$343
DE	0.4	$41,244	$41,244	-	$185	$343
FL	73.8	$35,000	$217,800	47	$185	$343
GA	10.7	$12,000	$136,000	-	$878	$975
IA	5.4	$15,787	$15,787	162	$185	$343
ID	1.5	$41,244	$41,244	348	$185	$343
IL	134.2	$41,244	$206,221	3,920	$185	$343
IN	44.0	$45,671	$91,341	11,316	$185	$343
KS	26.8	$52,622	$52,622	714	$185	$343
KY	11.5	$30,000	$64,600	7,916	$170	$396
LA	5.0	$15,787	$64,600	44	$185	$343
MA	1.5	$124,000	$621,166	-	$100	$343
MD	5.7	$12,917	$68,109	-	$294	$688
ME	0.4	$254,390	$377,230	-	$185	$343
MI	0.4	$40,000	$80,000	-	$185	$343
MN	27.5	$9,294	$76,443	33	$185	$343
MO	3.4	$15,787	$26,311	62	$95	$387
MS	2.3	$3,157	$26,311	86	$185	$343
MT	70.7	$41,244	$41,244	793	$185	$343
NC	18.0	$25,874	$69,736	25	$289	$381
ND	1138.0	$15,787	$15,787	201	$185	$343
NE	25.6	$15,787	$15,787	148	$185	$343
NH	0.4	$92,042	$128,330	-	$185	$343
NJ	3.8	$82,489	$412,443	-	$185	$343
NM	0.4	$42,098	$63,147	-	$185	$343
NV	141.9	$56,711	$67,022	98	$185	$343
NY	114.7	$50,000	$94,000	249	$310	$420
OH	228.7	$12,000	$72,000	8,247	$240	$450
OK	1.9	$15,787	$15,787	1,038	$185	$343
OR	14.9	$54,500	$125,170	-	$185	$343
PA	45.5	$12,000	$15,000	1,039	$185	$343
RI	0.4	$124,000	$160,000	-	$185	$343
SC	114.3	$26,311	$105,245	972	$79	$217
SD	131.5	$15,787	$15,787	331	$185	$343
TN	14.9	$25,000	$25,000	69	$54	$217
TX	186.6	$15,000	$45,000	5,837	$80	$220
UT	29.4	$56,711	$67,022	-	$185	$343
VA	59.3	$16,000	$140,000	-	$300	$977
VT	1.1	$110,000	$132,000	-	$185	$343
WA	3.1	$34,677	$318,546	48	$185	$343
WI	8.4	$58,000	$61,000	10	$185	$343
WV	85.3	$30,000	$64,000	9,279	$400	$869
WY	5.4	$15,787	$15,787	-	$185	$343
Total	**2,984**			**111,916**		

Position	Occupational Code[1]	Mean Hourly Wage[1]	Benefits Adjustment Factor[3]	Year Adjustment[4]	Total Hourly Adjusted Wage
Private Industry					
Environmental Scientist	19-2041	$35.89	1.3	1.03	$47.96
Environmental Engineer	17-2081	$41.74			$55.77
Administrative Assistant	43-6011	$27.32			$36.51
Lawyer	23-1011	$66.41			$88.74
Economist	19-3011	$50.54			$67.53
Local Government					
Environmental Scientist	19-2041	$30.27	1.35	1.02	$41.88
Environmental Engineer	17-2081	$37.58			$51.99
Administrative Assistant	43-6011	$25.09			$34.71
Lawyer	23-1011	$46.13			$63.82
Economist	19-3011	$36.35			$50.29
State Government					
Environmental Scientist	19-2041	$28.50	1.35	1.02	$39.43
Environmental Engineer	17-2081	$35.26			$48.78
Administrative Assistant	43-6011	$21.42			$29.63
Lawyer	23-1011	$40.19			$55.60
Economist	19-3011	$30.78			$42.58
Federal Government					
Environmental Scientist	19-2041	$46.93	1.31	1.03	$63.18
Environmental Engineer	17-2081	$46.91			$63.16
Administrative Assistant	43-6011	$27.32			$36.79
Lawyer	23-1011	$62.87			$84.65
Economist	19-3011	$53.54			$72.08

1. Occupational codes and mean hourly wage from BLS (2014). Bureau of Labor Statistics (BLS), United States Department of Labor. 2014. Occupational Employment and Wages, May 2013. http://www.bls.gov/oes/current/oes_nat.htm

2. Hourly mean wage for administrative assistants working in the federal government not calculated in the May 2013 dataset. Hourly mean wage for private industry used for federal government rate.

3. Adjusted for benefits according to the Employment Cost for Employee Compensation Index for professional and related for private industry, local and state employees, and civilian workers. Average value across all three quarters of 2013. http://www.bls.gov/ncs/ect/

4. Escalated to 2014 dollars using the seasonally-adjusted Employment Cost Index for private industry (May 2013 (Q2) =118.4, 2014 Q3=121.7), state and local employees (May 2013 (Q2) =121.0, 2014 Q3=124.0), and civilian workers (May 2013 (Q2) =118.9, 2014 Q3=122.2)

FTE Amount for 401	Number of States	Total FTE	Total Costs (2014$)
0.5	25	12.5	$1,123,351
10	20	200	$17,973,613
20	5	100	$8,986,807
	Total:	312.5	$28,083,771
	XX% Incremental Increase:	11.46875	$1,030,674

Average Hourly	Annual Salary including benefits		
$43.21	$89,868.07	$28,083,771.07	
$46.60	$96,925.43	$30,289,196.90	excluding admin assistant.

Enforcement Savings - Note this was cut from the analysis

1200 hours total

900	75% federal scientists and engineers	$56,853.00
300	25% federal lawyers	$25,393.66
		$82,246.66

402 Stormwater - $ millions

	Administrative Costs	Compliance Costs (low estimate)	Compliance Costs (high estimate)	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
1998 Values	5.3	545.0	678.7	540.5	686.0
Increment	0.2	20.0	24.9	19.8	25.2
30% Program Growth	0.3	26.0	32.4	25.8	32.7
2014 Values	0.4	37.8	47.0	37.5	47.5

Stormwater

1998 Program Size	130000	
2011 Program Size	169000	
	1.3	Size Increase

402 CAFO - $ millions

	Administrative Costs	Compliance Costs	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
2001 Values	9.0	326.0	204.0	355.0
49% Program Size Decrea	4.4	159.7	100.0	174.0
3.59% Increment	0.2	5.9	3.7	6.4
2014 Values	0.2	7.8	4.9	8.5

CAFO

2003 Program Size	15000	
2011 Program Size	7318	
	0.49	Size Decrease

402 Pesticide General Permit - $ millions

		Compliance Costs (low estimate)	Compliance Costs (high estimate)
2009 Values		10.18	11.22
Increment		0.37	0.41
Scale Up to Total Potential Universe		3.85	4.25
2014 Values		4.25	4.69

Original Universe	35,376
Total Potential Univers	365000
Size Increase	10.31773

311 Oil Spill Prevention Plans - Costs

Weighted Average Unit C	2010$ from Prop	2014$	
Production (35% of facilities)	9,128	$9,910	$3,468,485.95
Storage (65% of facilities)	13,038	$14,155	$9,200,694.22
			$12,669,180.17

2010$ from Proposal	
9,128	9910
13,038	14155

							Horizon (years)		50	Horizon (years)						
							0.03		0.07	20						
Study (Year)	Acres	Sample Size	WTP Value from Study	WTP Value from Study Inflated to 2010$	WTP Value from Study Inflated to 2014$	Annual Value	NPV Over 50-Year Horizon (per household) 2014$		Annual WTP (per household) 2014$		One-Time WTP per household per acre 2014$		Annual HH WTP Per Acre 2014$		NWI Wetland Type
							3%	7%	3%	7%	3%	7%	3%	7%	
Emergent Wetlands															
Johnson and Linder (1986)	1,307,187	705	$289.90 (1986$)	$576.77	$626.18	No	$626.18	$626.18	$42.09	$59.11	$0.0005	$0.0005	$0.00003	$0.00005	Emergent
Loomis et al. (1991) 1	85,000	803	154 (1991$)	$246.55	$267.68	Yes	$6,887.22	$3,694.12	$267.68	$267.68	$0.0810	$0.0435	$0.00315	$0.00315	Emergent
Loomis et al. (1991) 2	125000	803	254 (1991$)	$406.65	$441.49	Yes	$11,359.43	$6,092.89	$441.49	$441.49	$0.0909	$0.0487	$0.00353	$0.00353	Emergent
Azevedo et al. (2000) 1	7000	1045	$10 (2000$)	$12.66	$13.75	No	$13.75	$13.75	$0.92	$1.30	$0.0020	$0.0020	$0.00013	$0.00019	Emergent
Azevedo et al. (2000) 2	32345	2094	$25(2000$)	$31.66	$34.37	No	$34.37	$34.37	$2.31	$3.24	$0.0011	$0.0011	$0.00007	$0.00010	Emergent
Roberts and Leitch (1997) 1	5000	575	$6.33 (1997$)	$8.60	$9.34	Yes	$240.23	$128.85	$9.34	$9.34	$0.0480	$0.0258	$0.00187	$0.00187	Emergent
Poor (1999)	41000	952	$21.05 (1996$)	$29.25	$31.76	Yes	$817.20	$438.32	$31.76	$31.76	$0.0199	$0.0107	$0.00077	$0.00077	Emergent
Mullarky and Bishop (1999) 1	110	117	$13.68(1999$)	$17.91	$19.44	Yes	$500.16	$268.27	$19.44	$19.44	$4.5469	$2.4389	$0.17672	$0.17672	Emergent
Mullarky and Bishop (1999) 2	110	117	$24.07 (1999$)		$34.20	Yes	$880.04	$472.03	$34.20	$34.20	$8.0003	$4.2912	$0.31094	$0.31094	
Forested															
Lant and Tobin (1989) 1	2109	7	24.249 (1989$)	$42.71	$46.30	Yes	$1,191.17	$638.91	$46.30	$46.30	$0.5648	$0.3029	$0.02195	$0.02195	Forested
Lant and Tobin (1989) 2	1108	16	54.5916 (1989$)	$96.00	$104.22	Yes	$2,681.66	$1,438.37	$104.22	$104.22	$2.4203	$1.2982	$0.09407	$0.09407	Forested
Blomquist and Whitehead (1998) 1	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 2	500	95		$6.14	$6.67	Yes	$171.51	$92.00	$6.67	$6.67	$0.3430	$0.1840	$0.01333	$0.01333	Forested
Blomquist and Whitehead (1998) 3	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 4	500	95		$18.70	$20.30	Yes	$522.36	$280.18	$20.30	$20.30	$1.0447	$0.5604	$0.04060	$0.04060	Forested
Dillman et al (1993) 1	2500	505	$16.74 (1992$)	$26.02	$28.25	No	$28.25	$28.25	$1.90	$2.67	$0.0113	$0.0113	$0.00076	$0.00107	Forested
Whitehead and Blomquist (1991) 1	5000	63	$10.90 (1989$)	$19.17	$20.81	Yes	$535.43	$287.19	$20.81	$20.81	$0.1071	$0.0574	$0.00416	$0.00416	Forested
Whitehead and Blomquist (1991) 2	5000	63	$7.35 (1989$)	$12.93	$14.03	Yes	$361.05	$193.66	$14.03	$14.03	$0.0722	$0.0387	$0.00281	$0.00281	Forested
Whitehead and Blomquist (1991) 3	5000	80	$5.09 (1989$)	$8.95	$9.72	Yes	$250.03	$134.11	$9.72	$9.72	$0.0500	$0.0268	$0.00194	$0.00194	Forested
Whitehead and Blomquist (1991) 4	5000	80	$3.75 (1989$)	$6.59	$12.58	Yes	$323.72	$173.63	$12.58	$12.58	$0.0647	$0.0347	$0.00252	$0.00252	Forested
Whitehead and Blomquist (1991) 5	5000	72	$16.61 (1989$)	$29.21	$31.71	Yes	$815.92	$437.64	$31.71	$31.71	$0.1632	$0.0875	$0.00634	$0.00634	Forested
Whitehead and Blomquist (1991) 6	5000	72	$8.13(1989$)	$14.30	$15.52	Yes	$399.36	$214.21	$15.52	$15.52	$0.0799	$0.0428	$0.00310	$0.00310	Forested

WTP - All Wetland Types - 3% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437	705	0.09509	-0.726846423
Loomis et al. (1991) 1	$0.0810	-2.5130	803	0.05415	-0.136088911
Loomis et al. (1991) 2	$0.0909	-2.3983		0.05415	-0.129876374
Azevedo et al. (2000) 1	$0.0020	-6.2328	1045	0.14095	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.8470	2094	0.28244	-1.933871391
Roberts and Leitch (1997) 1	$0.0480	-3.0356	575	0.07756	-0.235428364
Poor (1999)	$0.0199	-3.9154	952	0.12841	-0.502765067
Mullarky and Bishop (1999) 1	$4.5469	1.5145	117	0.00789	0.011949756
Mullarky and Bishop (1999) 2	$8.0003	2.0795		0.00789	0.016408123
Lant and Tobin (1989) 1	$0.5648	-0.5713	7	0.00094	-0.000539381
Lant and Tobin (1989) 2	$2.4203	0.8839	16	0.00216	0.001907485
Blomquist and Whitehead (1998) 1	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 2	$0.3430	-1.0699	95	0.01281	-0.013709794
Blomquist and Whitehead (1998) 3	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 4	$1.0447	0.0438	95	0.01281	0.000560692
Dillman et al (1993) 1	$0.0113	-4.4831	505	0.06811	-0.305362366
Whitehead and Blomquist (1991) 1	$0.1071	-2.2341	63	0.00425	-0.009492138
Whitehead and Blomquist (1991) 2	$0.0722	-2.6282		0.00425	-0.011166399
Whitehead and Blomquist (1991) 3	$0.0500	-2.9956	80	0.00540	-0.016161871
Whitehead and Blomquist (1991) 4	$0.0647	-2.7373		0.00540	-0.014768424
Whitehead and Blomquist (1991) 5	$0.1632	-1.8129	72	0.00486	-0.008802742
Whitehead and Blomquist (1991) 6	$0.0799	-2.5273		0.00486	-0.012271852
			7414		-4.9521944
				geomean	0.007067882 WTP Overall 3%

Azevedo	Year		
	0	2500	1.00
	1	2427	0.97
	2	2356	0.94
	3	2288	0.92
	4	2221	0.89
	5	2157	0.86
	6	2094	0.84
	7	2033	0.81
	8	1974	0.79
	9	1916	0.77
	10	1860	0.74
	11	1806	0.72
	12	1753	0.70
	13	1702	0.68
	14	1653	0.66
	15	1605	0.64
		32345	12.94 0.07729209 3091.683

WTP - All Wetland Types - 7% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.09509037	-0.726846423
Loomis et al. (1991) 1	$0.0435	-3.135910061	803	0.054154303	-0.169823023
Loomis et al. (1991) 2	$0.0487	-3.021190877		0.054154303	-0.163610485
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.140949555	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.28243863	-1.933871391
Roberts and Leitch (1997) 1	$0.0258	-3.658518632	575	0.077555975	-0.28373998
Poor (1999)	$0.0107	-4.538367179	952	0.128405719	-0.5827523
Mullarky and Bishop (1999) 1	$2.4389	0.891527083	117	0.007890477	0.007034574
Mullarky and Bishop (1999) 2	$4.2912	1.456558422		0.007890477	0.011492941
Lant and Tobin (1989) 1	$0.3029	-1.1942071	7	0.00094416	-0.001127522
Lant and Tobin (1989) 2	$1.2982	0.260954858	16	0.002158079	0.000563161
Blomquist and Whitehead (1998) 1	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 2	$0.1840	-1.692867001	95	0.012813596	-0.021691714
Blomquist and Whitehead (1998) 3	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 4	$0.5604	-0.579168219	95	0.012813596	-0.007421228
Dillman et al (1993) 1	$0.0113	-4.483082337	505	0.068114378	-0.305362366
Whitehead and Blomquist (1991) 1	$0.0574	-2.857043702	63	0.004248719	-0.012138775
Whitehead and Blomquist (1991) 2	$0.0387	-3.251106178		0.004248719	-0.013813035
Whitehead and Blomquist (1991) 3	$0.0268	-3.61852866	80	0.005395198	-0.01952268
Whitehead and Blomquist (1991) 4	$0.0347	-3.360253142		0.005395198	-0.018129232
Whitehead and Blomquist (1991) 5	$0.0875	-2.435801567	72	0.004855678	-0.011827469
Whitehead and Blomquist (1991) 6	$0.0428	-3.150245567		0.004855678	-0.01529658
			7414		-5.209716322
				geomean	0.005463223 WTP Overall 7%

WTP-Emergent - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	$0.0810	-2.512984276	803	0.063821332	-0.160382004
Loomis et al. (1991) 2	$0.0909	-2.398265092		0.063821332	-0.153060473
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	$0.0480	-3.035592847	575	0.091400413	-0.277454441
Poor (1999)	$0.0199	-3.915441395	952	0.151327293	-0.592513147
Mullarky and Bishop (1999) 2	$8.0003	2.079484207	117	0.009298999	0.019337121
Mullarky and Bishop (1999) 1	$4.5469	1.514452867		0.009298999	0.014082895
			6291		-5.321000828 0.004888
					WTP Emergent 3%

WTP-Emergent - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	0.000479032	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	0.043460184	-3.135910061	803	0.063821332	-0.200137957
Loomis et al. (1991) 2	0.048743137	-3.021190877		0.063821332	-0.192816426
Azevedo et al. (2000) 1	0.001963962	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	0.001062586	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	0.02577066	-3.658518632	575	0.091400413	-0.334390115
Poor (1999)	0.010690849	-4.538367179	952	0.151327293	-0.68677882
Mullarky and Bishop (1999) 2	4.291165706	1.456558422	117	0.009298999	0.013544535
Mullarky and Bishop (1999) 1	2.438851137	0.891527083		0.009298999	0.008290309
			6291		-5.563299253 0.003836
					WTP Emergent 7%

WTP Forested - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.564801286	-0.571281316	7	0.006233304	-0.00356097
Lant and Tobin (1989) 2	2.420273723	0.883880642	16	0.014247551	0.012593135
Blomquist and Whitehead (1998) 1	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 2	0.343028681	-1.069941216	95	0.084594835	-0.090511501
Blomquist and Whitehead (1998) 3	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 4	1.044729046	0.043757565	95	0.084594835	0.003701664
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.107086547	-2.234117917	63	0.028049866	-0.062666709
Whitehead and Blomquist (1991) 2	0.072209736	-2.628180393		0.028049866	-0.073720109
Whitehead and Blomquist (1991) 3	0.05000647	-2.995602876	80	0.035618878	-0.106700013
Whitehead and Blomquist (1991) 4	0.064743151	-2.737327358		0.035618878	-0.097500529
Whitehead and Blomquist (1991) 5	0.163184179	-1.812875783	72	0.03205699	-0.058115341
Whitehead and Blomquist (1991) 6	0.07987281	-2.527319783		0.03205699	-0.081018266
			1123		-2.8861559 0.05579
					WTP Forested 3%

WTP Forested - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.302944063	-1.1942071	7	0.006233304	-0.007443855
Lant and Tobin (1989) 2	1.298169062	0.260954858	16	0.014247551	0.003717968
Blomquist and Whitehead (1998) 1	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 2	0.183991264	-1.692867001	95	0.084594835	-0.143207805
Blomquist and Whitehead (1998) 3	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 4	0.560364273	-0.579168219	95	0.084594835	-0.04899464
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.057438314	-2.857043702	63	0.028049866	-0.080139694
Whitehead and Blomquist (1991) 2	0.03873134	-3.251106178		0.028049866	-0.091193094
Whitehead and Blomquist (1991) 3	0.026822112	-3.61852866	80	0.035618878	-0.128887931
Whitehead and Blomquist (1991) 4	0.034726467	-3.360253142		0.035618878	-0.119688447
Whitehead and Blomquist (1991) 5	0.08752756	-2.435801567	72	0.03205699	-0.078084467
Whitehead and Blomquist (1991) 6	0.042841605	-3.150245567		0.03205699	-0.100987391
			1123		-3.228959226 0.039599
					WTP Forested 7%

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.76	0.57	0.004	0.032	$9,231	$9,231
KS	1,112,096	8.52	4.86	0.042	0.271	$347,996	$347,996
NE	721,130	10.55	2.26	0.052	0.126	$128,144	$128,144
OK	1,460,450	0.18	0.78	0.001	0.043	$64,685	$64,685
Central Plains	**3,293,676**	**19.25**	**7.90**	**0.026**	**0.138**	**$540,824**	$540,824
AR	1,147,084	0.30	9.06	0.001	0.506	$581,811	$581,811
LA	1,728,360	0.76	1.72	0.004	0.096	$172,582	$172,582
MS	1,115,768	0.05	1.10	0.000	0.061	$68,625	$68,625
TN	2,493,552	0.47	6.98	0.002	0.390	$977,463	$977,463
TX	8,922,933	50.52	42.78	0.247	2.387	$23,499,191	$23,499,191
Delta and Gulf	**15,407,697**	**52.11**	**61.65**	**0.144**	**1.498**	**25,299,672**	$25,299,672
IL	4,836,972	13.21	53.90	0.065	3.007	$14,857,720	$14,857,720
IN	2,502,154	4.89	17.09	0.024	0.954	$2,445,949	$2,445,949
KY	1,719,965	0.48	5.25	0.002	0.293	$508,039	$508,039
MI	3,872,508	0.02	0.17	0.000	0.010	$37,642	$37,642
MN	2,087,227	3.98	9.78	0.019	0.546	$1,179,887	$1,179,887
MO	2,375,611	0.33	1.39	0.002	0.077	$187,564	$187,564
OH	4,603,435	23.18	91.15	0.113	5.085	$23,931,880	$23,931,880
WI	2,279,768	0.87	3.33	0.004	0.186	$433,493	$433,493
Midwest	**24,277,640**	**46.98**	**182.07**	**0.039**	**1.756**	**43,582,174**	$43,582,174
AZ	2,380,990	2.58	11.76	0.013	0.656	$1,592,160	$1,592,160
CO	1,972,868	8.30	1.64	0.041	0.091	$260,459	$260,459
ID	579,408	0.59	0.18	0.003	0.010	$7,441	$7,441
NM	791,395	0.11	0.08	0.001	0.005	$4,105	$4,105
NV	1,006,250	53.46	17.48	0.261	0.975	$1,243,981	$1,243,981
UT	877,692	13.09	1.63	0.064	0.091	$136,048	$136,048
WY	226,879	2.10	0.57	0.010	0.032	$9,578	$9,578
Mountain	**7,835,482**	**80.23**	**33.34**	**0.055**	**0.360**	**3,253,772**	$3,253,772
CT	1,371,087	0.02	0.17	0.000	0.010	$13,479	$13,479
DE	342,297	0.01	0.18	0.000	0.010	$3,422	$3,422
MA	2,547,075	0.07	0.69	0.000	0.039	$99,352	$99,352
MD	2,156,411	0.23	2.64	0.001	0.147	$320,155	$320,155
ME	557,219	0.02	0.17	0.000	0.010	$5,383	$5,383
NH	518,973	0.03	0.16	0.000	0.009	$4,752	$4,752
NJ	3,214,360	0.19	1.73	0.001	0.096	$312,370	$312,370
NY	7,317,755	9.21	48.15	0.045	2.686	$19,985,349	$19,985,349
PA	5,018,904	3.75	19.00	0.018	1.060	$5,411,663	$5,411,663
RI	413,600	0.01	0.18	0.000	0.010	$4,199	$4,199
VT	256,442	0.12	0.45	0.001	0.025	$6,644	$6,644
WV	763,831	15.45	27.18	0.076	1.516	$1,216,018	$1,216,018
Northeast	**24,477,954**	**29.12**	**100.71**	**0.020**	**1.099**	**27,382,786**	$27,382,786
CA	12,577,498	34.42	13.76	0.168	0.768	$11,772,474	$11,772,474
OR	1,518,938	5.93	1.52	0.029	0.085	$173,173	$173,173
WA	2,620,076	0.80	0.73	0.004	0.041	$117,450	$117,450
Pacific	**16,716,512**	**41.15**	**16.02**	**0.13**	**0.59**	**12,063,097**	$12,063,097
IA	1,221,576	1.29	1.39	0.006	0.078	$102,403	$102,403
MT	409,607	30.30	5.08	0.148	0.283	$176,638	$176,638
ND	281,192	560.12	8.87	2.738	0.495	$909,066	$909,066
SD	322,282	64.02	1.75	0.313	0.098	$132,356	$132,356
Prairie Potholes	**2,234,657**	**655.72**	**17.09**	**0.42**	**0.17**	**1,320,463**	$1,320,463
AL	1,883,791	0.34	9.02	0.002	0.503	$951,581	$951,581
FL	7,420,802	11.53	25.37	0.056	1.415	$10,921,381	$10,921,381
GA	3,585,584	0.29	5.06	0.001	0.282	$1,017,723	$1,017,723
NC	3,745,155	0.27	8.72	0.001	0.486	$1,826,654	$1,826,654
SC	1,801,181	3.52	53.64	0.017	2.993	$5,421,527	$5,421,527
VA	3,056,058	3.12	26.51	0.015	1.479	$4,567,029	$4,567,029
Southeast	**21,492,571**	**19.08**	**128.33**	**0.02**	**1.13**	**24,705,895**	$24,705,895

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.004	0.032	$9,231
Central Plains	3,293,676	19.2	7.9	0.026	0.138	$540,824
Delta and Gulf	15,407,697	52.1	61.6	0.144	1.498	$25,299,672
Midwest	24,277,640	47.0	182.1	0.039	1.756	$43,582,174
Mountain	7,835,482	80.2	33.3	0.055	0.360	$3,253,772
Northeast	24,477,954	29.1	100.7	0.020	1.099	$27,382,786
Pacific	16,716,512	41.1	16.0	0.130	0.592	$12,063,097
Prairie Potholes	2,234,657	655.7	17.1	0.420	0.171	$1,320,463
Southeast	21,492,571	19.1	128.3	0.024	1.126	$24,705,895
Total						$138,157,914

Regional Approach - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.004	0.032	$9,231
Central Plains	3,293,676	19.2	7.9	0.094	0.441	$1,761,815
Delta and Gulf	15,407,697	52.1	61.6	0.255	3.439	$56,918,113
Midwest	24,277,640	47.0	182.1	0.230	10.158	$252,182,167
Mountain	7,835,482	80.2	33.3	0.392	1.860	$17,647,266
Northeast	24,477,954	29.1	100.7	0.142	5.618	$141,009,848
Pacific	16,716,512	41.1	16.0	0.201	0.894	$18,301,756
Prairie Potholes	2,234,657	655.7	17.1	3.205	0.954	$9,293,162
Southeast	21,492,571	19.1	128.3	0.093	7.160	$155,882,276
Total						$653,005,633

Blended Approach - 3% Discount Rate

Region	# Households	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.004	0.032	$9,231
Central Plains	3,293,676	19.2	7.9	0.060	0.290	$1,151,320
Delta and Gulf	15,407,697	52.1	61.6	0.199	2.469	$41,108,892
Midwest	24,277,640	47.0	182.1	0.134	5.957	$147,882,170
Mountain	7,835,482	80.2	33.3	0.224	1.110	$10,450,519
Northeast	24,477,954	29.1	100.7	0.081	3.359	$84,196,317
Pacific	16,716,512	41.1	16.0	0.165	0.743	$15,182,427
Prairie Potholes	2,234,657	655.7	17.1	1.813	0.562	$5,306,812
Southeast	21,492,571	19.1	128.3	0.058	4.143	$90,294,085
Total						$395,581,774

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.76	0.57	0.003	0.023	$6,624	$6,624
KS	1,112,096	8.52	4.86	0.033	0.193	$250,476	$250,476
NE	721,130	10.55	2.26	0.040	0.090	$93,744	$93,744
OK	1,460,450	0.18	0.78	0.001	0.031	$46,007	$46,007
Central Plains	**3,293,676**	**19.25**	**7.90**	**0.020**	**0.098**	**$390,227**	$390,227
AR	1,147,084	0.30	9.06	0.001	0.359	$413,084	$413,084
LA	1,728,360	0.76	1.72	0.003	0.068	$122,978	$122,978
MS	1,115,768	0.05	1.10	0.000	0.043	$48,729	$48,729
TN	2,493,552	0.47	6.98	0.002	0.277	$694,213	$694,213
TX	8,922,933	50.52	42.78	0.194	1.694	$16,844,568	$16,844,568
Delta and Gulf	**15,407,697**	**52.11**	**61.65**	**0.113**	**1.063**	**18,123,572**	$18,123,572
IL	4,836,972	13.21	53.90	0.051	2.134	$10,569,114	$10,569,114
IN	2,502,154	4.89	17.09	0.019	0.677	$1,740,572	$1,740,572
KY	1,719,965	0.48	5.25	0.002	0.208	$360,900	$360,900
MI	3,872,508	0.02	0.17	0.000	0.007	$26,744	$26,744
MN	2,087,227	3.98	9.78	0.015	0.387	$840,506	$840,506
MO	2,375,611	0.33	1.39	0.001	0.055	$133,420	$133,420
OH	4,603,435	23.18	91.15	0.089	3.609	$17,025,461	$17,025,461
WI	2,279,768	0.87	3.33	0.003	0.132	$308,415	$308,415
Midwest	**24,277,640**	**46.98**	**182.07**	**0.031**	**1.246**	**31,005,133**	$31,005,133
AZ	2,380,990	2.58	11.76	0.010	0.466	$1,132,332	$1,132,332
CO	1,972,868	8.30	1.64	0.032	0.065	$190,877	$190,877
ID	579,408	0.59	0.18	0.002	0.007	$5,406	$5,406
NM	791,395	0.11	0.08	0.000	0.003	$2,945	$2,945
NV	1,006,250	53.46	17.48	0.205	0.692	$902,681	$902,681
UT	877,692	13.09	1.63	0.050	0.065	$100,778	$100,778
WY	226,879	2.10	0.57	0.008	0.023	$6,973	$6,973
Mountain	**7,835,482**	**80.23**	**33.34**	**0.043**	**0.255**	**2,341,993**	$2,341,993
CT	1,371,087	0.02	0.17	0.000	0.007	$9,576	$9,576
DE	342,297	0.01	0.18	0.000	0.007	$2,430	$2,430
MA	2,547,075	0.07	0.69	0.000	0.027	$70,585	$70,585
MD	2,156,411	0.23	2.64	0.001	0.105	$227,418	$227,418
ME	557,219	0.02	0.17	0.000	0.007	$3,825	$3,825
NH	518,973	0.03	0.16	0.000	0.006	$3,378	$3,378
NJ	3,214,360	0.19	1.73	0.001	0.068	$221,933	$221,933
NY	7,317,755	9.21	48.15	0.035	1.906	$14,209,885	$14,209,885
PA	5,018,904	3.75	19.00	0.014	0.752	$3,847,989	$3,847,989
RI	413,600	0.01	0.18	0.000	0.007	$2,982	$2,982
VT	256,442	0.12	0.45	0.000	0.018	$4,727	$4,727
WV	763,831	15.45	27.18	0.059	1.076	$867,432	$867,432
Northeast	**24,477,954**	**29.12**	**100.71**	**0.016**	**0.780**	**19,472,162**	$19,472,162
CA	12,577,498	34.42	13.76	0.132	0.545	$8,514,634	$8,514,634
OR	1,518,938	5.93	1.52	0.023	0.060	$126,220	$126,220
WA	2,620,076	0.80	0.73	0.003	0.029	$84,128	$84,128
Pacific	**16,716,512**	**41.15**	**16.02**	**0.10**	**0.42**	**8,724,982**	$8,724,982
IA	1,221,576	1.29	1.39	0.005	0.055	$73,260	$73,260
MT	409,607	30.30	5.08	0.116	0.201	$129,925	$129,925
ND	281,192	560.12	8.87	2.149	0.351	$703,007	$703,007
SD	322,282	64.02	1.75	0.246	0.069	$101,512	$101,512
Prairie Potholes	**2,234,657**	**655.72**	**17.09**	**0.33**	**0.12**	**1,007,704**	$1,007,704
AL	1,883,791	0.34	9.02	0.001	0.357	$675,649	$675,649
FL	7,420,802	11.53	25.37	0.044	1.005	$7,783,141	$7,783,141
GA	3,585,584	0.29	5.06	0.001	0.200	$722,740	$722,740
NC	3,745,155	0.27	8.72	0.001	0.345	$1,296,886	$1,296,886
SC	1,801,181	3.52	53.64	0.014	2.124	$3,850,407	$3,850,407
VA	3,056,058	3.12	26.51	0.012	1.050	$3,245,075	$3,245,075
Southeast	**21,492,571**	**19.08**	**128.33**	**0.02**	**0.80**	**17,573,899**	$17,573,899

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.003	0.023	$6,624
Central Plains	3,293,676	19.2	7.9	0.020	0.098	$390,227
Delta and Gulf	15,407,697	52.1	61.6	0.113	1.063	$18,123,572
Midwest	24,277,640	47.0	182.1	0.031	1.246	$31,005,133
Mountain	7,835,482	80.2	33.3	0.043	0.255	$2,341,993
Northeast	24,477,954	29.1	100.7	0.016	0.780	$19,472,162
Pacific	16,716,512	41.1	16.0	0.102	0.420	$8,724,982
Prairie Potholes	2,234,657	655.7	17.1	0.330	0.121	$1,007,704
Southeast	21,492,571	19.1	128.3	0.019	0.799	$17,573,899
Total						$98,646,295

Regional Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.003	0.023	$6,624
Central Plains	3,293,676	19.2	7.9	0.074	0.313	$1,273,752
Delta and Gulf	15,407,697	52.1	61.6	0.200	2.441	$40,693,724
Midwest	24,277,640	47.0	182.1	0.180	7.210	$179,411,655
Mountain	7,835,482	80.2	33.3	0.308	1.320	$12,756,221
Northeast	24,477,954	29.1	100.7	0.112	3.988	$100,347,073
Pacific	16,716,512	41.1	16.0	0.158	0.634	$13,242,486
Prairie Potholes	2,234,657	655.7	17.1	2.515	0.677	$7,133,561
Southeast	21,492,571	19.1	128.3	0.073	5.082	$110,792,196
Total						$465,657,291

Blended Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	0.8	0.6	0.003	0.023	$6,624
Central Plains	3,293,676	19.2	7.9	0.047	0.206	$831,989
Delta and Gulf	15,407,697	52.1	61.6	0.156	1.752	$29,408,648
Midwest	24,277,640	47.0	182.1	0.106	4.228	$105,208,394
Mountain	7,835,482	80.2	33.3	0.176	0.788	$7,549,107
Northeast	24,477,954	29.1	100.7	0.064	2.384	$59,909,617
Pacific	16,716,512	41.1	16.0	0.130	0.527	$10,983,734
Prairie Potholes	2,234,657	655.7	17.1	1.423	0.399	$4,070,632
Southeast	21,492,571	19.1	128.3	0.046	2.940	$64,183,047
Total						$282,151,793

Source: U.S. Census Bureau, 2010 Census Summary File 1
http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

STATE	Households	Total New Impacted Acres by State	**Freshwater Emergent Proportions**	**Forested Emergent Proportions**	New Acreage Emergent	New Acreage Forested	Benefits by State Total Wetland Acres		3%		WTP Per HH by Type 3% Rate		7%		WTP Per HH by Type 7% rate		Overall WTP per HH		**Total Benefits Check**	
							3%	7%	Emergent	Forested	Emergent	Forested	Emergent	Forested	Emergent	Forested	3%	7%	3%	7%
AK	258,058	1.3	0.5709	0.4291	0.8	0.6	$9,231	$6,624	$964	$8,267	$0.004	$0.032	$756	$5,868	$0.003	$0.023	$0.04	$0.03	$9,231	$6,624
AL	1,883,791	9.4	0.0368	0.9632	0.3	9.0	$951,581	$675,649	$3,171	$948,410	$0.002	$0.503	$2,488	$673,160	$0.001	$0.357	$0.51	$0.36	$951,581	$675,649
AR	1,147,084	9.4	0.0324	0.9676	0.3	9.1	$581,811	$413,084	$1,703	$580,108	$0.001	$0.506	$1,337	$411,748	$0.001	$0.359	$0.51	$0.36	$581,811	$413,084
AZ	2,380,990	14.3	0.1799	0.8201	2.6	11.8	$1,592,160	$1,132,332	$30,021	$1,562,138	$0.013	$0.656	$23,562	$1,108,771	$0.010	$0.466	$0.67	$0.48	$1,592,160	$1,132,332
CA	12,577,498	48.2	0.7144	0.2856	34.4	13.8	$11,772,474	$8,514,634	$2,115,994	$9,656,480	$0.168	$0.768	$1,660,679	$6,853,955	$0.132	$0.545	$0.94	$0.68	$11,772,474	$8,514,634
CO	1,972,868	9.9	0.8352	0.1648	8.3	1.6	$260,459	$190,877	$80,068	$180,391	$0.041	$0.091	$62,839	$128,037	$0.032	$0.065	$0.13	$0.10	$260,459	$190,877
CT	1,371,087	0.2	0.0859	0.9141	0.0	0.2	$13,479	$9,576	$110	$13,369	$0.000	$0.010	$86	$9,489	$0.000	$0.007	$0.01	$0.01	$13,479	$9,576
DE	342,297	0.2	0.0689	0.9311	0.0	0.2	$3,422	$2,430	$22	$3,400	$0.000	$0.010	$17	$2,413	$0.000	$0.007	$0.01	$0.01	$3,422	$2,430
FL	7,420,802	36.9	0.3125	0.6875	11.5	25.4	$10,921,381	$7,783,141	$418,250	$10,503,131	$0.056	$1.415	$328,252	$7,454,889	$0.044	$1.005	$1.47	$1.05	$10,921,381	$7,783,141
GA	3,585,584	5.4	0.0544	0.9456	0.3	5.1	$1,017,723	$722,740	$5,106	$1,012,617	$0.001	$0.282	$4,008	$718,733	$0.001	$0.200	$0.28	$0.20	$1,017,723	$722,740
IA	1,221,576	2.7	0.4808	0.5192	1.3	1.4	$102,403	$73,260	$7,684	$94,719	$0.006	$0.078	$6,030	$67,230	$0.005	$0.055	$0.08	$0.06	$102,403	$73,260
ID	579,408	0.8	0.7661	0.2339	0.6	0.2	$7,441	$5,406	$1,659	$5,782	$0.003	$0.010	$1,302	$4,104	$0.002	$0.007	$0.01	$0.01	$7,441	$5,406
IL	4,836,972	67.1	0.1968	0.8032	13.2	53.9	$14,857,720	$10,569,114	$312,273	$14,545,447	$0.065	$3.007	$245,079	$10,324,036	$0.051	$2.134	$3.07	$2.19	$14,857,720	$10,569,114
IN	2,502,154	22.0	0.2226	0.7774	4.9	17.1	$2,445,949	$1,740,572	$59,860	$2,386,089	$0.024	$0.954	$46,979	$1,693,593	$0.019	$0.677	$0.98	$0.70	$2,445,949	$1,740,572
KS	1,112,096	13.4	0.6367	0.3633	8.5	4.9	$347,996	$250,476	$46,320	$301,676	$0.042	$0.271	$36,353	$214,123	$0.033	$0.193	$0.31	$0.23	$347,996	$250,476
KY	1,719,965	5.7	0.0843	0.9157	0.5	5.3	$508,039	$360,900	$4,067	$503,972	$0.002	$0.293	$3,192	$357,708	$0.002	$0.208	$0.30	$0.21	$508,039	$360,900
LA	1,728,360	2.5	0.3068	0.6932	0.8	1.7	$172,582	$122,978	$6,442	$166,140	$0.004	$0.096	$5,056	$117,922	$0.003	$0.068	$0.10	$0.07	$172,582	$122,978
MA	2,547,075	0.8	0.0940	0.9060	0.1	0.7	$99,352	$70,585	$895	$98,456	$0.000	$0.039	$703	$69,882	$0.000	$0.027	$0.04	$0.03	$99,352	$70,585
MD	2,156,411	2.9	0.0790	0.9210	0.2	2.6	$320,155	$227,418	$2,388	$317,767	$0.001	$0.147	$1,874	$225,544	$0.001	$0.105	$0.15	$0.11	$320,155	$227,418
ME	557,219	0.2	0.1034	0.8966	0.0	0.2	$5,383	$3,825	$54	$5,329	$0.000	$0.010	$42	$3,783	$0.000	$0.007	$0.01	$0.01	$5,383	$3,825
MI	3,872,508	0.2	0.0973	0.9027	0.0	0.2	$37,642	$26,744	$352	$37,290	$0.000	$0.010	$276	$26,467	$0.000	$0.007	$0.01	$0.01	$37,642	$26,744
MN	2,087,227	13.8	0.2893	0.7107	4.0	9.8	$1,179,887	$840,506	$40,629	$1,139,257	$0.019	$0.546	$31,887	$808,620	$0.015	$0.387	$0.57	$0.40	$1,179,887	$840,506
MO	2,375,611	1.7	0.1946	0.8054	0.3	1.4	$187,564	$133,420	$3,889	$183,675	$0.002	$0.077	$3,052	$130,368	$0.001	$0.055	$0.08	$0.06	$187,564	$133,420
MS	1,115,768	1.1	0.0427	0.9573	0.0	1.1	$68,625	$48,729	$267	$68,358	$0.000	$0.061	$210	$48,519	$0.000	$0.043	$0.06	$0.04	$68,625	$48,729
MT	409,607	35.4	0.8565	0.1435	30.3	5.1	$176,638	$129,925	$60,655	$115,983	$0.148	$0.283	$47,603	$82,322	$0.116	$0.201	$0.43	$0.32	$176,638	$129,925
NC	3,745,155	9.0	0.0297	0.9703	0.3	8.7	$1,826,654	$1,296,886	$4,890	$1,821,764	$0.001	$0.486	$3,838	$1,293,048	$0.001	$0.345	$0.49	$0.35	$1,826,654	$1,296,886
ND	281,192	569.0	0.9844	0.0156	560.1	8.9	$909,066	$703,007	$769,840	$139,226	$2.738	$0.495	$604,187	$98,820	$2.149	$0.351	$3.23	$2.50	$909,066	$703,007
NE	721,130	12.8	0.8235	0.1765	10.5	2.3	$128,144	$93,744	$37,183	$90,961	$0.052	$0.126	$29,182	$64,562	$0.040	$0.090	$0.18	$0.13	$128,144	$93,744
NH	518,973	0.2	0.1552	0.8448	0.0	0.2	$4,752	$3,378	$75	$4,676	$0.000	$0.009	$59	$3,319	$0.000	$0.006	$0.01	$0.01	$4,752	$3,378
NJ	3,214,360	1.9	0.0975	0.9025	0.2	1.7	$312,370	$221,933	$2,928	$309,442	$0.001	$0.096	$2,298	$219,635	$0.001	$0.068	$0.10	$0.07	$312,370	$221,933
NM	791,395	0.2	0.5631	0.4369	0.1	0.1	$4,105	$2,945	$416	$3,688	$0.001	$0.005	$327	$2,618	$0.000	$0.003	$0.01	$0.004	$4,105	$2,945
NV	1,006,250	70.9	0.7536	0.2464	53.5	17.5	$1,243,981	$902,681	$262,925	$981,056	$0.261	$0.975	$206,349	$696,332	$0.205	$0.692	$1.24	$0.90	$1,243,981	$902,681
NY	7,317,755	57.4	0.1606	0.8394	9.2	48.1	$19,985,349	$14,209,885	$329,519	$19,655,830	$0.045	$2.686	$258,614	$13,951,272	$0.035	$1.906	$2.73	$1.94	$19,985,349	$14,209,885
OH	4,603,435	114.3	0.2028	0.7972	23.2	91.2	$23,931,880	$17,025,461	$521,612	$23,410,268	$0.113	$5.085	$409,373	$16,616,089	$0.089	$3.609	$5.20	$3.70	$23,931,880	$17,025,461
OK	1,460,450	1.0	0.1858	0.8142	0.2	0.8	$64,685	$46,007	$1,268	$63,417	$0.001	$0.043	$995	$45,012	$0.001	$0.031	$0.04	$0.03	$64,685	$46,007
OR	1,518,938	7.5	0.7956	0.2044	5.9	1.5	$173,173	$126,220	$44,047	$129,125	$0.029	$0.085	$34,569	$91,650	$0.023	$0.060	$0.11	$0.08	$173,173	$126,220
PA	5,018,904	22.8	0.1650	0.8350	3.8	19.0	$5,411,663	$3,847,989	$92,091	$5,319,572	$0.018	$1.060	$72,275	$3,775,714	$0.014	$0.752	$1.08	$0.77	$5,411,663	$3,847,989
RI	413,600	0.2	0.0529	0.9471	0.0	0.2	$4,199	$2,982	$20	$4,179	$0.000	$0.010	$16	$2,966	$0.000	$0.007	$0.01	$0.01	$4,199	$2,982
SC	1,801,181	57.2	0.0616	0.9384	3.5	53.6	$5,421,527	$3,850,407	$31,023	$5,390,503	$0.017	$2.993	$24,348	$3,826,060	$0.014	$2.124	$3.01	$2.14	$5,421,527	$3,850,407
SD	322,282	65.8	0.9734	0.0266	64.0	1.8	$132,356	$101,512	$100,846	$31,511	$0.313	$0.098	$79,146	$22,366	$0.246	$0.069	$0.41	$0.31	$132,356	$101,512
TN	2,493,552	7.5	0.0632	0.9368	0.5	7.0	$977,463	$694,213	$5,748	$971,715	$0.002	$0.390	$4,511	$689,702	$0.002	$0.277	$0.39	$0.28	$977,463	$694,213
TX	8,922,933	93.3	0.5415	0.4585	50.5	42.8	$23,499,191	$16,844,568	$2,203,558	$21,295,633	$0.247	$2.387	$1,729,401	$15,115,167	$0.194	$1.694	$2.63	$1.89	$23,499,191	$16,844,568
UT	877,692	14.7	0.8892	0.1108	13.1	1.6	$136,048	$100,778	$56,158	$79,890	$0.064	$0.091	$44,074	$56,704	$0.050	$0.065	$0.16	$0.11	$136,048	$100,778
VA	3,056,058	29.6	0.1054	0.8946	3.1	26.5	$4,567,029	$3,245,075	$46,638	$4,520,391	$0.015	$1.479	$36,602	$3,208,473	$0.012	$1.050	$1.49	$1.06	$4,567,029	$3,245,075
VT	256,442	0.6	0.2087	0.7913	0.1	0.5	$6,644	$4,727	$150	$6,494	$0.001	$0.025	$118	$4,609	$0.000	$0.018	$0.03	$0.02	$6,644	$4,727
WA	2,620,076	1.5	0.5203	0.4797	0.8	0.7	$117,450	$84,128	$10,191	$107,259	$0.004	$0.041	$7,998	$76,130	$0.003	$0.029	$0.04	$0.03	$117,450	$84,128
WI	2,279,768	4.2	0.2079	0.7921	0.9	3.3	$433,493	$308,415	$9,746	$423,747	$0.004	$0.186	$7,649	$300,766	$0.003	$0.132	$0.19	$0.14	$433,493	$308,415
WV	763,831	42.6	0.3625	0.6375	15.5	27.2	$1,216,018	$867,432	$57,700	$1,158,317	$0.076	$1.516	$45,284	$822,148	$0.059	$1.076	$1.59	$1.14	$1,216,018	$867,432
WY	226,879	2.7	0.7862	0.2138	2.1	0.6	$9,578	$6,973	$2,334	$7,244	$0.010	$0.032	$1,831	$5,142	$0.008	$0.023	$0.04	$0.03	$9,578	$6,973
Total	**115,994,247**	1492.1			944.4	547.7	$138,157,914	$98,646,295	$7,793,753											

Benefits from all IPs, half of GPs					$0.01	$0.004
1492.1	1492.1				$5.20	$3.70

Region	**Households**	**Incremental Increase in Impacts (Acres)**		**Annual Benefits**							
		Emergent	**Forested**	**7%**							**3%**
Alaska	-	0.0	0.0	$0							$0
Central Plains	3,293,676	0.0	0.0	$0							$0
Delta and Gulf	15,407,697	-	-	$0							$0
Midwest	-	-	-	$0							$0
Mountain	7,835,482	-	-	$0							$0
Northeast	24,477,954	-	-	$0							$0
Pacific	16,716,512	-	-	$0							$0
Prairie Potholes	2,234,657	-	-	$0							$0
Southeast	21,492,571	-	-	$0							$0
Total				$0							$0

	NWI ESTUARINE MARINE DEEPWATER	NWI ESTUARINE MARINE WETLAND	NWI FRESHWATER EMERG WETLAND	NWI FRESHWATER FORESTSHRUB WET	NWI FRESHWATER POND	NWI OTHER	NWI LAKE	NWI RIVERINE	TOTAL	forested+emergent	Freshwater Emergent	Freshwater forested
AL	127,191.45	32,743.56	109,525.28	2,870,151.89	118,466.10	196.80	462,774.91	58,434.09	3,779,484.09	2,979,677.17	0.0368	0.9632
AK	21,893,487.57	1,937,506.22	21,850,331.84	16,420,206.51	1,113,002.35	34,833.20	4,771,491.38	1,861,458.78	69,882,317.84	38,270,538.34	0.5709	0.4291
AZ	0.00	0.00	14,465.07	65,942.87	11,227.39	1,156.62	115,408.37	78,577.09	286,777.41	80,407.94	0.1799	0.8201
AR	0.00	0.00	25,079.15	748,426.69	28,243.39	353.85	112,854.07	75,664.18	990,621.33	773,505.84	0.0324	0.9676
CA	2,255,932.43	203,764.38	885,867.03	354,187.44	79,834.16	423,863.20	1,553,494.99	284,834.80	6,041,778.42	1,240,054.46	0.7144	0.2856
CO	0.00	0.00	387,249.32	76,437.50	20,014.86	2,602.30	30,702.84	22,975.51	539,982.33	463,686.82	0.8352	0.1648
CT	478,199.85	18,789.01	12,613.21	134,281.18	34,375.44	17.48	37,854.40	14,973.58	731,104.14	146,894.39	0.0859	0.9141
DE	326,650.92	83,705.25	11,804.60	159,575.27	3,792.89	3,713.18	4,230.46	4,683.44	598,156.02	171,379.86	0.0689	0.9311
DC	0.00	0.00	11.74	192.64	32.36	0.57	345.96	4,092.97	4,676.24	204.39	0.0575	0.9425
FL	4,654,846.69	1,456,688.10	3,087,525.80	6,792,869.84	249,006.87	8,419.30	1,148,651.75	146,164.55	17,544,172.91	9,880,395.65	0.3125	0.6875
GA	210,444.76	372,675.10	255,659.35	4,441,710.33	220,025.86	2,003.46	335,672.75	71,233.28	5,909,424.89	4,697,369.69	0.0544	0.9456
HI	1,694,241.94	5,394.11	14,698.08	131,010.94	2,073.27	0.00	3,465.78	6,371.78	1,857,255.91	145,709.02	0.1009	0.8991
ID	0.00	0.00	372,787.37	113,808.69	16,517.25	2,211.15	371,244.68	72,576.40	949,145.54	486,596.06	0.7661	0.2339
IL	0.00	0.00	197,814.21	807,254.67	143,031.52	592.58	716,279.45	108,490.59	1,973,463.01	1,005,068.88	0.1968	0.8032
IN	0.00	0.00	156,754.41	547,435.45	99,074.90	1,007.75	408,274.81	56,655.32	1,269,202.64	704,189.86	0.2226	0.7774
IA	0.00	0.00	337,381.15	364,367.32	111,951.19	264.11	221,190.14	124,827.08	1,159,980.98	701,748.47	0.4808	0.5192
KS	0.00	0.00	58,705.79	33,497.88	59,087.85	1,524.27	83,002.87	45,133.43	280,952.11	92,203.68	0.6367	0.3633
KY	0.00	0.00	26,977.23	292,881.64	113,863.38	2,313.52	380,292.86	81,806.63	898,135.25	319,858.87	0.0843	0.9157
LA	3,921,389.16	1,725,050.22	993,045.42	2,243,841.83	50,380.70	906.57	413,553.75	395,662.82	9,743,830.46	3,236,887.24	0.3068	0.6932
ME	1,424,902.76	152,878.96	200,952.03	1,743,145.52	56,110.61	678.31	939,291.22	96,993.58	4,614,952.99	1,944,097.55	0.1034	0.8966
MD	329,346.18	248,926.18	33,958.30	395,833.76	17,066.28	1,360.62	22,370.82	40,585.05	1,089,447.19	429,792.06	0.0790	0.9210
MA	1,146,352.17	83,121.85	39,681.74	382,303.10	27,667.58	462.74	127,450.93	21,732.40	1,828,772.51	421,984.84	0.0940	0.9060
MI	0.00	0.00	624,318.68	5,794,913.73	153,652.09	21,496.97	6,637,618.40	73,477.66	13,305,477.53	6,419,232.40	0.0973	0.9027
MN	0.00	0.00	2,928,138.43	7,193,418.06	219,297.23	456.99	3,184,385.66	95,490.32	13,621,186.68	10,121,556.48	0.2893	0.7107
MS	105,937.55	59,175.05	87,595.13	1,961,941.68	85,433.10	440.11	144,363.35	58,076.71	2,502,962.67	2,049,536.81	0.0427	0.9573
MO	0.00	0.00	180,859.15	748,430.91	264,093.89	2,920.47	317,187.05	229,760.07	1,743,251.55	929,290.06	0.1946	0.8054
MT	0.00	0.00	522,255.95	87,493.30	70,635.05	7,566.54	597,110.06	267,790.80	1,552,851.71	609,749.26	0.8565	0.1435
NE	0.00	0.00	510,352.11	109,379.83	94,897.61	8,543.51	162,354.01	147,988.79	1,033,515.87	619,731.95	0.8235	0.1765
NV	22.85	0.00	503,170.27	164,489.22	1,888.03	3,958.74	1,299,880.28	6,928.64	1,980,338.01	667,659.49	0.7536	0.2464
NH	50,552.46	10,183.30	39,203.44	213,332.30	26,036.83	42.26	167,329.44	21,060.27	527,740.30	252,535.74	0.1552	0.8448
NJ	874,766.86	212,940.14	67,314.86	623,176.00	25,916.16	3,609.54	51,377.56	29,986.69	1,889,087.81	690,490.86	0.0975	0.9025
NM	0.00	0.00	51,215.82	39,738.21	18,684.35	5,316.87	118,227.93	53,164.92	286,348.10	90,954.03	0.5631	0.4369
NY	1,947,536.85	41,143.60	219,943.89	1,149,432.16	94,086.92	22,405.84	1,214,218.51	151,357.08	4,840,124.84	1,369,376.05	0.1606	0.8394
NC	786,004.63	294,130.65	111,190.97	3,628,891.55	111,776.54	1,182.45	321,338.37	103,281.11	5,357,796.26	3,740,082.52	0.0297	0.9703
ND	0.00	0.00	2,180,889.20	34,555.22	114,822.83	2,207.82	1,177,099.70	71,634.78	3,581,209.56	2,215,444.42	0.9844	0.0156
OH	0.00	0.00	88,258.93	347,038.41	99,819.46	315.67	793,073.21	61,203.78	1,389,709.46	435,297.34	0.2028	0.7972
OK	0.00	0.00	151,120.70	662,097.16	253,612.02	10,843.57	584,596.83	192,738.30	1,855,008.59	813,217.86	0.1858	0.8142
OR	668,462.65	68,740.05	1,038,356.84	266,685.83	59,986.38	4,507.06	610,045.12	215,786.76	2,932,570.69	1,305,042.67	0.7956	0.2044
PA	647.44	55.33	59,022.77	298,702.29	61,734.03	673.00	321,019.39	174,061.55	915,915.79	357,725.06	0.1650	0.8350
RI	261,023.26	8,212.76	3,051.22	54,658.06	4,743.86	0.26	19,490.29	1,079.06	352,258.78	57,709.28	0.0529	0.9471
SC	503,477.29	385,550.94	195,939.06	2,982,784.17	97,010.62	2,180.40	369,776.55	65,444.41	4,602,163.45	3,178,723.23	0.0616	0.9384
SD	0.00	0.00	1,638,700.20	44,860.20	182,639.48	7,385.49	636,819.51	77,292.44	2,587,697.32	1,683,560.41	0.9734	0.0266
TN	0.00	0.00	49,393.15	731,540.61	88,850.19	697.83	485,110.82	128,680.42	1,484,273.02	780,933.76	0.0632	0.9368
TX	1,916,395.66	589,482.60	1,093,581.44	925,928.44	136,909.63	71,075.34	503,579.36	138,732.93	5,375,685.40	2,019,509.88	0.5415	0.4585
UT	0.00	0.00	254,135.81	31,674.16	23,771.29	650.64	1,026,447.70	29,124.68	1,365,804.28	285,809.97	0.8892	0.1108
VT	0.00	0.00	46,692.78	177,068.74	14,047.04	1,202.46	221,527.16	13,562.84	474,101.01	223,761.51	0.2087	0.7913
VA	405,186.05	319,489.63	107,645.06	914,097.46	82,997.48	2,170.30	143,998.17	150,468.68	2,126,052.82	1,021,742.51	0.1054	0.8946
WA	1,848,981.15	236,502.70	336,371.40	310,164.34	48,297.50	4,755.44	596,236.55	125,651.85	3,506,960.93	646,535.73	0.5203	0.4797
WV	0.00	0.00	13,622.84	23,959.48	16,572.06	251.40	19,638.04	92,072.08	166,115.90	37,582.32	0.3625	0.6375
WI	0.00	0.00	613,897.84	2,338,487.40	96,948.89	22,242.22	1,434,676.91	137,982.01	4,644,235.28	2,952,385.24	0.2079	0.7921
WY	0.00	0.00	702,102.84	190,955.69	59,978.49	23,105.33	389,968.38	104,269.29	1,470,380.02	893,058.52	0.7862	0.2138
GU	181,633.98	257.66	1,397.85	2,167.04	29.84	0.00	198.98	3.98	185,689.33	3,564.89	0.3921	0.6079
MP	67,448.48	1,136.97	463.61	162.27	19.78	0.00	43.11	1.44	69,275.67	625.89	0.7407	0.2593
PR	811,864.26	43,960.45	59,723.22	14,010.53	1,193.03	0.00	415.48	652.43	931,819.40	73,733.75	0.8100	0.1900
VI	235,240.80	1,142.16	17.00	109.58	118.81	0.00	137.84	0.00	236,766.19	126.58	0.1343	0.8657
US and Isla	49,128,168.10	8,593,346.92	43,552,830.56	71,185,706.99	5,185,346.71	720,686.11	35,809,188.91	6,692,734.13	220,868,008.42	114,738,537.54	0.3796	0.6204
US Only	47,831,980.58	8,546,849.68	43,491,228.88	71,169,257.56	5,183,985.25	720,686.11	35,808,393.50	6,692,076.28	219,444,457.84	114,660,486.44	0.3793	0.6207

STATE	JA	TOTAL_JDS	DELINEATE	IMPNDMN	ISOLATE	NRPW	NRPWW	RPW	RPWWD	RPWWN	TNWPRW	TNW	TNWW	UPLAND	WATER_TYPE_NULL	TOT WET	TOT ISO	WET NO	STR TOT	STR NO	
AK	N	180	0	0	6	0	0	1	0	1	0	0	0	154	19	215	6	1	334	1	AK
AK	Y	584	0	0	0	0	0	132	70	12	0	201	132	2	34						
AL	N	285	0	2	42	3	2	1	4	0	0	0	1	139	94	113	42	7	362	4	AL
AL	Y	500	0	0	0	11	15	28	43	5	4	315	43	0	33						
AR	N	360	2	1	30	5	0	111	6	13	0	0	0	178	13	80	30	19	213	116	AR
AR	Y	380	3	0	0	14	3	59	26	6	0	24	26	0	220						
AS	Y	5	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	0	4	0	American Samoa
AZ	N	834	0	0	75	709	0	0	0	0	0	0	0	50	0	43	75	0	1070	709	AZ
AZ	Y	408	2	0	0	349	0	8	5	0	0	4	38	0	2						
CA	N	377	8	10	250	3	0	0	2	0	1	0	0	61	51	258	250	2	490	4	CA
CA	Y	865	1	3	0	135	11	239	73	40	1	111	132	9	101						
CO	N	136	9	0	49	1	1	0	0	2	0	0	0	75	7	30	49	3	82	1	CO
CO	Y	130	2	1	0	21	2	48	18	4	0	12	3	1	10						
CT	Y	16	0	0	0	0	0	6	0	1	0	6	2	0	1	3	0	0	12	0	CT
DC	Y	4	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	3	0	DC
DE	N	7	0	0	0	0	0	0	0	0	0	0	0	5	2	24	0	0	19	0	DE
DE	Y	72	0	0	0	0	3	6	12	0	1	12	9	0	29						
FL	N	321	7	20	184	7	1	1	0	7	0	0	1	32	64	370	184	9	734	8	FL
FL	Y	1939	1	0	0	52	57	125	165	46	3	546	93	0	848						
GA	N	103	1	0	24	0	4	0	0	0	0	0	0	38	36	81	24	4	25	0	GA
GA	Y	146	1	2	0	5	2	9	1	29	0	11	45	1	40						
GU	Y	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	Guam
HI	N	20	0	0	0	0	0	0	0	0	0	0	0	19	0	2	0	0	142	0	HI
HI	Y	149	0	0	0	2	0	28	0	1	0	112	1	3	3						
IA	N	63	20	0	14	1	0	0	0	0	0	0	0	17	11	85	14	0	87	1	IA
IA	Y	209	1	0	0	8	4	53	66	4	0	25	11	0	37						
ID	N	64	2	0	4	0	0	2	0	0	0	0	0	49	7	21	4	0	38	2	ID
ID	Y	60	0	0	0	2	1	20	6	1	0	14	13	0	3						
IL	N	466	31	19	349	17	0	10	1	0	0	0	1	37	7	207	349	2	402	27	IL
IL	Y	714	0	0	0	12	19	230	160	4	0	133	22	1	127						
IN	N	273	0	1	110	0	0	2	1	4	0	0	0	42	114	107	110	5	133	2	IN
IN	Y	380	0	0	0	53	20	53	29	51	0	25	2	1	145						
KS	N	229	0	3	69	0	1	2	0	0	0	0	0	143	11	34	69	1	119	2	KS
KS	Y	214	0	5	0	33	2	18	12	15	0	66	4	1	58						
KY	N	271	1	0	30	8	0	4	0	0	0	0	0	221	10	42	30	0	274	12	KY
KY	Y	347	0	4	0	85	2	84	4	19	1	92	17	0	36						
LA	N	2009	0	2	2	0	0	8	9	0	0	0	2	1597	383	678	2	11	1288	8	LA
LA	Y	4278	0	22	0	55	28	412	321	22	0	813	296	32	2283						
MA	N	5	0	1	3	0	1	0	0	0	0	0	0	0	0	4	3	1	7	0	MA
MA	Y	10	0	0	0	0	1	3	1	1	0	4	0	0	0						
MD	N	16	0	0	15	0	0	0	0	0	0	0	0	3	1	90	15	0	247	0	MD
MD	Y	2550	0	1	0	15	10	105	53	10	0	127	17	0	2209						
ME	Y	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	ME
MI	N	5	0	0	0	0	0	0	0	0	0	0	0	4	0	84	0	0	1555	0	MI
MI	Y	1747	1	0	0	0	0	26	2	2	0	1529	80	0	108						
MN	N	166	11	0	65	1	0	0	2	4	0	0	1	23	60	48	65	7	73	1	MN
MN	Y	209	3	0	0	0	0	19	13	4	0	53	24	0	92						
MO	N	193	4	17	6	1	0	1	0	3	0	0	0	142	18	78	6	3	732	2	MO
MO	Y	923	0	1	0	29	20	46	4	18	0	655	33	4	114						
MP	N	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	Mariana Islands
MP	Y	3	0	0	0	0	0	0	0	0	0	2	0	0	1						
MS	N	332	0	0	6	1	0	0	0	0	0	0	0	274	51	42	6	0	155	1	MS
MS	Y	212	0	0	0	1	1	28	6	6	0	125	29	1	15						
MT	N	187	2	1	185	0	0	1	0	0	0	0	0	7	1	133	185	0	90	1	MT
MT	Y	235	0	0	0	1	12	56	104	17	0	32	0	0	3						
NC	N	253	7	1	47	1	0	1	0	0	0	0	0	105	98	1582	47	0	2577	2	NC
NC	Y	5188	8	119	0	28	12	2245	1117	195	3	299	258	10	887						
ND	N	3024	54	3	2947	15	11	2	11	2	3	0	5	14	15	417	2947	29	217	20	ND
ND	Y	679	21	6	0	19	3	73	291	27	84	21	67	0	9						
NE	N	65	0	0	52	1	0	0	0	0	0	0	15	0	0	175	52	15	77	1	NE
NE	Y	244	0	0	0	30	47	28	49	17	4	14	47	2	3						
NH	Y	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	NH
NJ	N	10	0	0	10	0	0	0	0	0	0	0	0	0	0	68	10	0	73	0	NJ
NJ	Y	153	0	0	0	1	0	3	0	0	2	67	68	0	12						
NM	N	35	0	0	1	1	0	0	0	0	0	0	0	28	5	0	1	0	6	1	NM
NM	Y	8	0	0	0	4	0	1	0	0	0	0	0	0	3						
NV	N	420	1	1	368	15	1	3	0	2	0	0	0	26	5	35	368	3	136	18	NV
NV	Y	152	0	0	0	62	5	51	16	10	0	5	1	0	0						
NY	N	345	0	2	298	0	0	7	1	1	0	0	0	29	32	378	298	2	874	7	NY
NY	Y	1486	23	1	0	20	9	443	317	33	0	404	17	0	194						
OH	N	808	57	6	594	35	1	11	3	0	1	0	0	55	81	604	594	4	1168	47	OH
OH	Y	2086	44	22	0	259	60	744	298	188	0	118	54	3	260						
OK	N	20	1	0	4	3	1	3	0	0	0	0	0	8	0	20	4	1	138	6	OK
OK	Y	157	0	3	0	66	8	53	5	4	2	11	2	0	3						
OR	N	56	7	0	38	0	1	0	0	0	0	0	0	5	5	59	38	1	31	0	OR
OR	Y	114	0	0	0	1	14	22	29	9	0	8	6	0	25						
PA	N	238	68	1	118	1	1	2	0	0	0	0	0	43	43	192	118	1	460	3	PA
PA	Y	773	55	0	0	14	5	426	104	50	0	17	32	10	21						
PR	N	6	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	29	0	Puerto Rico
PR	Y	35	2	0	0	0	0	2	0	0	0	27	0	1	3						
RI	Y	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	RI
SC	N	677	7	4	230	7	6	13	33	30	1	0	0	331	110	995	230	69	656	21	SC
SC	Y	2216	69	42	0	45	58	432	524	142	1	157	202	14	435						
SD	N	373	0	0	343	5	1	1	0	0	0	0	0	9	20	104	343	1	71	6	SD
SD	Y	176	0	0	0	25	66	23	28	1	0	17	8	0	2						
TN	N	115	0	2	39	2	0	2	0	0	0	0	0	40	30	27	39	0	967	4	TN
TN	Y	1140	0	0	0	8	1	64	6	18	0	891	2	0	150						
TX	N	958	6	1	486	18	1	2	0	0	0	0	1	380	68	654	486	2	1376	20	TX
TX	Y	2211	2	31	0	52	14	162	99	59	1	1141	480	7	158						
UT	N	91	2	1	72	0	0	0	4	0	0	0	1	12	3	52	72	5	49	0	UT
UT	Y	116	0	0	0	5	3	42	33	9	0	2	2	1	15						
VA	N	264	4	1	154	0	0	0	1	0	0	0	0	92	19	318	154	1	734	0	VA
VA	Y	1286	1	3	0	87	4	391	267	27	0	256	19	1	223						
VI	Y	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	Virgin Islands
VT	N	3	0	0	2	0	1	0	0	0	0	0	0	0	0	1	2	1	2	0	VT
VT	Y	4	0	0	0	0	0	2	0	0	0	0	0	0	2						
WA	N	14	0	0	7	0	1	1	0	0	0	0	0	1	7	67	7	1	1077	1	WA
WA	Y	1181	0	0	0	5	4	237	34	7	0	834	21	0	36						
WI	N	166	54	0	18	0	2	1	1	0	1	0	1	61	28	203	18	4	389	2	WI
WI	Y	738	42	3	0	0	3	222	140	30	26	139	26	18	88						
WV	N	407	4	9	214	34	3	16	0	6	2	0	0	115	9	141	214	9	591	52	WV
WV	Y	805	28	5	0	59	3	405	85	25	9	66	19	1	95						
WY	N	66	4	0	12	2	1	1	0	1	1	0	0	45	0	4	12	2	7	4	WY
WY	Y	6	0	0	0	0	0	3	2	0	0	0	0	0	0						
	N	620	1	1	573	16	0	0	0	0	0	0	0	30	4						
	Y	166	10	0	0	1	2	24	27	10	15	28	21	1	22						
		54359	696	384	8145	2587	576	8151	4744	1255	167	9588	2453	4870	10743				20409		
							9028												20409		

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0000SA0
Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100
Years: 1984 to 2014

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	102.9	104.9
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	106.6	108.5
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	109.1	110.1
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	112.4	114.9
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3	116.8	119.7
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	122.7	125.3
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	128.7	132.6
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	135.2	137.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	139.2	141.4
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	143.7	145.3
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	147.2	149.3
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	151.5	153.2
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9	155.8	157.9
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5	159.9	161.2
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	162.3	163.7
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	165.4	167.8
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	170.8	173.6
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	176.6	177.5
2002	177.1	177.8	178.8	179.8	179.8	179.9	180.1	180.7	181.0	181.3	181.3	180.9	179.9	178.9	180.9
2003	181.7	183.1	184.2	183.8	183.5	183.7	183.9	184.6	185.2	185.0	184.5	184.3	184.0	183.3	184.6
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	187.6	190.2
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	193.2	197.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	200.6	202.6
2007	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208.936	210.177	210.036	207.342	205.709	208.976
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212.425	210.228	215.303	214.429	216.177
2009	211.143	212.193	212.709	213.240	213.856	215.693	215.351	215.834	215.969	216.177	216.330	215.949	214.537	213.139	215.935
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179	218.056	217.535	218.576
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672	224.939	223.598	226.280
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230.221	229.601	229.594	228.850	230.338
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877	234.149	233.546	233.069	233.049	232.957	232.366	233.548
2014	233.916	234.781	236.293	237.072	237.900	238.343	238.250	237.852	238.031	237.433	236.151	234.812	236.736	236.384	237.088

	Number of ORM2 Records (FY2013)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2013)	Percent Positive Jurisdiction (FY2013)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	53,968	65%			100.0%	
Wetlands	24,571	30%			100.0%	
Other Waters	4,604	6%	0.0%			
Total	83,143	100%				

	Number of ORM2 Records (FY2014)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY2014)	Percent Positive Jurisdiction (FY2014)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	49,623	64%				
Wetlands	22,210	29%				
Other Waters	5,111	7%				
Total	76,944	100%				

	Number of ORM2 Records (FY13-14)	Percent of Total ORM2 Records	Positive Jurisdictional Records (FY13-14)	Percent Positive Jurisdiction (FY13-14)	Projected Percent Positive Jurisdiction	Relative Contribution to Overall Change in Jurisdiction
Streams	103,591	61%	102,894	99.3%	100.0%	0.41%
Wetlands	46,781	28%	46,273	98.9%	100.0%	0.30%
Other Waters	19,430	11%	0	0.0%	34.5%	3.94%
Total	169,802	100%	149,166	*87.8%*	*92.5%*	4.65%

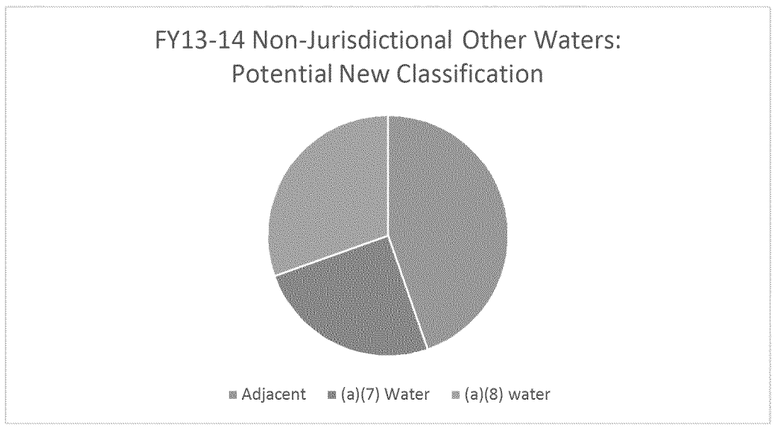
Label	A	B	C	D	E	F
Formula		A/Total(A)		C/A		(E-D)*B
				% Change Jurisdictional Input to all other cells		4.65%

Records from ORM2 FY13				% Jurisdictional in FY13	# Jurisdictional in FY13
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	7085	6%			
IMPNDMNT	594	1%			
ISOLATE	4604	4%	Other Waters	0%	0
NRPW	12133	10%	Streams	97%	11769.01
NRPWW	3221	3%	Wetlands	97%	3124.37
RPW	28397	24%	Streams	100%	28397
RPWWD	11514	10%	Wetlands	100%	11514
RPWWN	6123	5%	Wetlands	97%	5939.31
TNW	12476	11%	Streams	100%	12476
TNWRPW	962	1%	Streams	100%	962
TNWW	3713	3%	Wetlands	100%	3713
UPLAND	4733	4%		N/A	
Grand Total	117268	100%			

% Streams Jurisdictional	0.993255
% Wetlands Jurisdictional	0.988591

17%	Adjacent
9.50%	(a)(7) Water
11.60%	(a)(8) water

17%	
9.50%	
11.60%	



Records from ORM2 FY14				% Jurisdictional	# Jurisdictio
Category	Total	%Total	Group		
NULL	21713	19%			
DELINEATE	9681	9%			
IMPNDMNT	595	1%			
ISOLATE	5111	5%	Other Waters	0%	0
NRPW	11110	10%	Streams	97%	10776.7
NRPWW	2502	2%	Wetlands	97%	2426.94
RPW	26165	23%	Streams	100%	26165
RPWWD	10755	9%	Wetlands	100%	10755
RPWWN	5095	4%	Wetlands	97%	4942.15
TNW	11949	11%	Streams	100%	11949
TNWRPW	399	0%	Streams	100%	399
TNWW	3858	3%	Wetlands	100%	3858
UPLAND	4583	4%		N/A	
Grand Total	113516	100%			

% Streams Jurisdictional	0.993283
% Wetlands Jurisdictional	0.989738

	Annual Costs (FY14$ millions)		Annual Benefits (FY14$ millions)	
	Low	**High**	**Low**	**High**
CWA 402 CAFO Administration	$0.3	$0.3	$6.2	$10.8
CWA 402 CAFO Implementation	$9.9	$9.9		
CWA 402 Stormwater Administration	$0.5	$0.5	$47.5	$60.2
CWA 402 Stormwater Implementation	$47.8	$59.6		
CWA 404 Permit Application	$47.0	$80.3	$501.2	$501.2
CWA 404 Mitigation – Wetlands	$89.0	$249.4		
SUBTOTAL	**$194.6**	**$399.9**	**$554.9**	**$572.3**
CWA 311 Compliance	$12.7	$12.7	*not quantified*	
CWA 401 Administration	$1.3	$1.3	*not quantified*	
CWA 402 Pesticide General Permit Implementation	$5.4	$5.9	*not quantified*	
CWA 404 Mitigation – Streams	$22.8	$45.2	*not quantified*	
TOTAL	**$236.7**	**$465.0**	**$554.9**	**$572.3**

Permit Type	Maximum Number of 404 Permits Issued (FY09-14)	Estimated Additional Permits w/ Rule (Assuming % increase in jurisdiction)	FY13 Average Impact Per Permit (Acres)	Total Additional Impacts (Acres)
IP	4,672	217	5.94	1,290.45
GP	60,020	2,791	0.43	1,200.10
Total	64,692	3,008		2,491

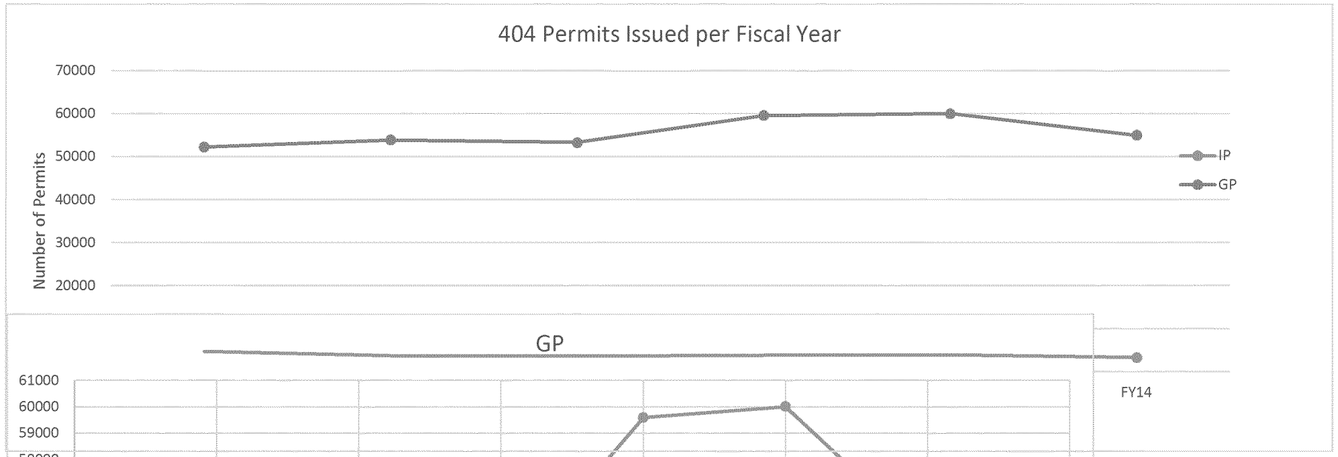
Permit Type	Additional Permits with Rule	FY13 Avg. Impact per Permit (acres)	Unit Costs from Corps NWP Analysis (2014$)	Unit Costs from SZ Study (2014$)	Estimated Additional Annual Permitting Costs (2014$ millions) Low	Estimated Additional Annual Permitting Costs (2014$ millions) High
IP	217	5.94	$34,100	$62,000 plus $16,800 per acre of impact	$7.4	$13.6
GP	2,791	0.43	$14,200	$23,900 plus $13,200 per acre of impact	$39.6	$66.7
Total	3,008				$47.0	$80.3

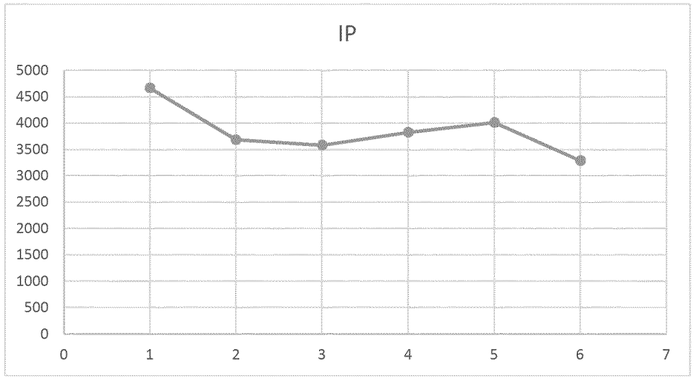
s

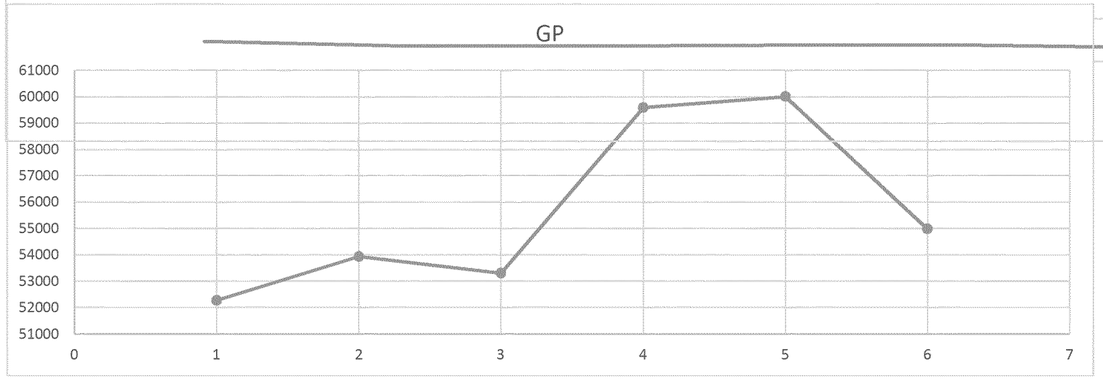
IP=SP+LOP
GP=NWP+RGP+PGP

Inflating Costs:		Corps NWP	SZ - Fixed Cost	SZ - Acre Cost
	IP	$34,104	$62,079	$16,763
	GP	$14,210	$23,971	$13,194

Fiscal Year	IP	GP	Total
FY09	4672	52287	56959
FY10	3692	53946	57638
FY11	3591	53322	56913
FY12	3834	59603	63437
FY13	4019	60020	64039
FY14	3292	54998	58290
Average	3850	55696	59546
Maximum	4672	60020	64692







Excluding temporary, restoration, conversion from the start.

Fiscal Year	IP	GP	Total
FY09	3149	28398	31547
FY10	2349	27254	29603
FY11	2928	32398	35326
FY12	3042	32347	35389
FY13	3029	30976	34005
FY14	2494	30244	32738

	FY13 JD Records								Unit Cost Per Acre Mitigated	
	Total Isolated	Total Wetland	Neg JD Wetland		New Mitigation	New Mitigation	Total Cost Low	Total Cost High	Unit Cost Low	Unit Cost High
STATE	ISO TOT	WET TOT	WET NO	% No		NEW MIT			UNIT COST LOW	UNIT COST HIGH
AK	6	215	1	0.09%	3.4	3.4	$18,653	$186,531	$5,500	$55,000
AL	42	113	7	0.63%	23.7	23.7	$249,854	$499,707	$10,524	$21,049
AR	30	80	19	0.63%	23.7	23.7	$49,971	$124,927	$2,105	$5,262
AZ	75	43	0	0.96%	36.3	36.3	$327,035	$835,755	$9,000	$23,000
CA	250	258	2	3.23%	122.1	122.1	$2,258,720	$42,732,540	$18,500	$350,000
CO	49	30	3	0.67%	25.2	25.2	$848,483	$2,651,508	$33,678	$105,245
CT	1	3	0	0.01%	0.5	0.5	$60,077	$227,930	$124,000	$470,448
DE	1	24	0	0.01%	0.5	0.5	$19,983	$19,983	$41,244	$41,244
FL	184	370	9	2.47%	93.5	93.5	$3,272,770	$20,365,980	$35,000	$217,800
GA	24	81	4	0.36%	13.6	13.6	$162,791	$1,844,960	$12,000	$136,000
IA	14	85	0	0.18%	6.8	6.8	$107,080	$107,080	$15,787	$15,787
ID	4	21	0	0.05%	1.9	1.9	$79,931	$79,931	$41,244	$41,244
IL	349	207	2	4.50%	170.1	170.1	$7,013,923	$35,069,616	$41,244	$206,221
IN	110	107	5	1.47%	55.7	55.7	$2,544,632	$5,089,264	$45,671	$91,341
KS	69	34	1	0.90%	33.9	33.9	$1,784,669	$1,784,669	$52,622	$52,622
KY	30	42	0	0.38%	14.5	14.5	$436,046	$938,953	$30,000	$64,600
LA	2	678	11	0.17%	6.3	6.3	$99,432	$406,880	$15,787	$64,600
MA	3	4	1	0.05%	1.9	1.9	$240,310	$1,203,810	$124,000	$621,166
MD	15	90	0	0.19%	7.3	7.3	$93,875	$494,975	$12,917	$68,109
ME	1	0	0	0.01%	0.5	0.5	$123,251	$182,766	$254,390	$377,230
MI	1	84	0	0.01%	0.5	0.5	$19,380	$38,760	$40,000	$80,000
MN	65	48	7	0.92%	34.9	34.9	$324,209	$2,666,615	$9,294	$76,443
MO	6	78	3	0.12%	4.4	4.4	$68,837	$114,729	$15,787	$26,311
MS	6	42	0	0.08%	2.9	2.9	$9,178	$76,486	$3,157	$26,311
MT	185	133	0	2.37%	89.6	89.6	$3,696,797	$3,696,797	$41,244	$41,244
NC	47	1582	0	0.60%	22.8	22.8	$589,185	$1,587,980	$25,874	$69,736
ND	2947	417	29	38.13%	1441.9	1441.9	$22,762,180	$22,762,180	$15,787	$15,787
NE	52	175	15	0.86%	32.5	32.5	$512,455	$512,455	$15,787	$15,787
NH	1	0	0	0.01%	0.5	0.5	$44,594	$62,175	$92,042	$128,330
NJ	10	68	0	0.13%	4.8	4.8	$399,654	$1,998,269	$82,489	$412,443
NM	1	0	0	0.01%	0.5	0.5	$20,396	$30,594	$42,098	$63,147
NV	368	35	3	4.75%	179.7	179.7	$10,193,668	$12,047,062	$56,711	$67,022
NY	298	378	2	3.84%	145.3	145.3	$7,267,439	$13,662,785	$50,000	$94,000
OH	594	604	4	7.66%	289.7	289.7	$3,476,743	$20,860,456	$12,000	$72,000
OK	4	20	1	0.06%	2.4	2.4	$38,243	$38,243	$15,787	$15,787
OR	38	59	1	0.50%	18.9	18.9	$1,029,796	$2,365,130	$54,500	$125,170
PA	118	192	1	1.52%	57.7	57.7	$691,860	$864,825	$12,000	$15,000
RI	1	0	0	0.01%	0.5	0.5	$60,077	$77,519	$124,000	$160,000
SC	230	995	69	3.83%	144.9	144.9	$3,811,543	$15,246,173	$26,311	$105,245
SD	343	104	1	4.41%	166.7	166.7	$2,631,112	$2,631,112	$15,787	$15,787
TN	39	27	0	0.50%	18.9	18.9	$472,384	$472,384	$25,000	$25,000
TX	486	654	2	6.25%	236.4	236.4	$3,546,510	$10,639,530	$15,000	$45,000
UT	72	52	5	0.99%	37.3	37.3	$2,115,667	$2,500,334	$56,711	$67,022
VA	154	318	1	1.99%	75.1	75.1	$1,201,550	$10,513,561	$16,000	$140,000
VT	2	1	1	0.04%	1.5	1.5	$159,884	$191,860	$110,000	$132,000
WA	7	67	1	0.10%	3.9	3.9	$134,407	$1,234,673	$34,677	$318,546
WI	18	203	4	0.28%	10.7	10.7	$618,217	$650,194	$58,000	$61,000
WV	214	141	9	2.86%	108.0	108.0	$3,241,278	$6,914,726	$30,000	$64,000
WY	12	4	2	0.18%	6.8	6.8	$107,080	$107,080	$15,787	$15,787
Total	**7578**	**8966**	**226**	100.00%	3781.0	**3781**	**$89,035,807**	**$249,412,453**		

Assuming 2:1 all IPs $41,572 $112,691 Average Costs
2:1 half of GPs

	2013-2014 Aquatic Resource/JD Records, ACOE					Amount of Stream Linear Feet Mitigated			Unit Cost Per Linear Foot Mitigated		Total Mitigation Cost	
	Total Streams	Neg JD Streams	% Neg JD Streams		Waters No	Baseline Mitigation	Mit Per Stream	Increased Mitigation	Low Cost	High Cost	Unit Cost Low	Unit Cost High
STATE	STR TOT	STR NO	%STR NO	STR Waters	STR	BASE MIT		MIT INC	UNIT COST LOW	UNIT COST HIGH	STR COST LOW	STR COST HIGH
AK	334	1	0.3%	1711	5	7,780.0	4.6	23.4	$1,000	$1,000	$23,363	$23,363
AL	362	4	1.1%	1855	20	202,179.8	110.2	2259.0	$380	$964	$858,379	$2,177,830
AR	213	116	54.5%	1091	594	45,876.0	92.3	54862.1	$185	$343	$10,125,521	$18,821,556
AZ	1070	709	66.3%	5482	3632	509.0	0.3	999.7	$185	$343	$184,502	$342,957
CA	490	4	0.8%	2510	20	87,846.5	35.3	723.0	$185	$343	$133,442	$248,046
CO	82	1	1.2%	420	5	1,100.0	2.7	13.6	$185	$343	$2,506	$4,659
CT	12	0	0.0%	61	0	3,720.0	60.5	0.0	$185	$343	$0	$0
DE	19	0	0.0%	97	0	1,106.0	11.4	0.0	$185	$343	$0	$0
FL	734	8	1.1%	3760	41	4,281.7	1.2	47.2	$185	$343	$8,708	$16,187
GA	25	0	0.0%	128	0	80,029.8	624.8	0.0	$878	$975	$0	$0
IA	87	1	1.1%	446	5	13,961.0	31.7	162.3	$185	$343	$29,962	$55,693
ID	38	2	5.3%	195	10	6,263.1	34.0	348.0	$185	$343	$64,219	$119,371
IL	402	27	6.7%	2060	138	54,447.0	28.3	3920.2	$185	$343	$723,522	$1,344,899
IN	133	2	1.5%	681	10	741,215.0	1,104.4	11316.3	$185	$343	$2,088,565	$3,882,274
KS	119	2	1.7%	610	10	41,786.0	69.7	714.3	$185	$343	$131,832	$245,052
KY	274	12	4.4%	1404	61	172,828.0	128.8	7915.8	$170	$396	$1,345,684	$3,134,651
LA	1288	8	0.6%	6599	41	6,970.0	1.1	43.6	$185	$343	$8,040	$14,945
MA	7	0	0.0%	36	0	0.0	0.0	0.0	$100	$343	$0	$0
MD	247	0	0.0%	1265	0	7,575.0	6.0	0.0	$294	$688	$0	$0
ME	1	0	0.0%	5	0	0.0	0.0	0.0	$185	$343	$0	$0
MI	1555	0	0.0%	7967	0	650.0	0.1	0.0	$185	$343	$0	$0
MN	73	1	1.4%	374	5	2,400.0	6.5	33.3	$185	$343	$6,152	$11,436
MO	732	2	0.3%	3750	10	22,541.0	6.0	61.8	$95	$387	$5,850	$23,900
MS	155	1	0.6%	794	5	13,319.4	16.9	86.5	$185	$343	$15,963	$29,672
MT	90	1	1.1%	461	5	70,604.0	154.8	793.3	$185	$343	$146,415	$272,159
NC	2577	2	0.1%	13202	10	31,880.4	2.4	24.8	$289	$381	$7,156	$9,434
ND	217	20	9.2%	1112	102	1,981.7	2.0	201.2	$185	$343	$37,132	$69,022
NE	77	1	1.3%	394	5	11,258.0	28.9	148.1	$185	$343	$27,340	$50,820
NH	0	0	0.0%	0	0	0.0	0.0	0.0	$185	$343	$0	$0
NJ	73	0	0.0%	374	0	13.1	0.0	0.0	$185	$343	$0	$0
NM	6	1	16.7%	31	5	0.0	0.0	0.0	$185	$343	$0	$0
NV	136	18	13.2%	697	92	645.0	1.1	98.4	$185	$343	$18,159	$33,755
NY	874	7	0.8%	4478	36	30,828.3	6.9	248.9	$310	$420	$77,160	$104,539
OH	1168	47	4.0%	5984	241	196,708.8	34.3	8247.4	$240	$450	$1,979,371	$3,711,321
OK	138	6	4.3%	707	31	22,837.2	33.8	1038.1	$185	$343	$191,587	$356,126
OR	31	0	0.0%	159	0	4,208.0	26.5	0.0	$185	$343	$0	$0
PA	460	3	0.7%	2357	15	158,268.6	67.6	1039.0	$185	$343	$191,754	$356,437
RI	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
SC	656	21	3.2%	3361	108	29,404.3	9.0	972.4	$79	$217	$76,757	$211,146
SD	71	6	8.5%	364	31	3,590.0	10.8	331.4	$185	$343	$61,161	$113,688
TN	967	4	0.4%	4954	20	16,600.0	3.4	69.0	$54	$217	$3,743	$14,972
TX	1376	20	1.5%	7050	102	395,716.3	57.0	5836.5	$80	$220	$466,922	$1,286,313
UT	49	0	0.0%	251	0	22,607.0	90.1	0.0	$185	$343	$0	$0
VA	734	0	0.0%	3760	0	449,672.6	119.6	0.0	$300	$977	$0	$0
VT	2	0	0.0%	10	0	0.0	0.0	0.0	$185	$343	$0	$0
WA	1077	1	0.1%	5518	5	51,978.5	9.4	48.3	$185	$343	$8,916	$16,573
WI	389	2	0.5%	1993	10	1,975.0	1.0	10.2	$185	$343	$1,884	$3,502
WV	591	52	8.8%	3028	266	96,179.0	34.8	9278.9	$400	$869	$3,711,546	$8,058,999
WY	7	4	57.1%	36	20	0.0	0.0	0.0	$185	$343	$0	$0
Total	20220			103,591		3,115,340.2		111915.6			$22,763,211	$45,165,295
						590.02655			$223	$412		

State	Source(s) for IWR estimates	Low Stream LF/cred	High Stream LF/cred	Low Est acres (IWR)	Hi Est Acres (IWR)	Low Stream LF/cred 2014$	High Stream LF/cred 2014$	Low Est acres (IWR) 2014$	Hi Est Acres (IWR) 2014$	Notes		LF/Credit Proposal (2010$)	LF/Credit Proposal (2010$)	LF/Credit Proposal (2014$)	LF/Credit Proposal (2014$)
AK	District survey, TCF 2013 ILF program instrument	$1,000	$55,000	$5,500	$55,000	$1,000	$1,000	$5,500	$55,000	High price is per acre of stream	AK	$170	$316	$185	$343
AL	District 2011	$350		$10,000	$20,000	$380	$964	$10,524	$21,049	2011->2014$	AL	$350	$888	$380	$964
AR	District 2011			$2,000	$5,000	$185	$343	$2,105	$5,262	2011->2014$	AR	$170	$316	$185	$343
AZ	District website			$9,000	$23,000	$185	$343	$9,000	$23,000		AZ	$170	$316	$185	$343
CA	District website, Other Bankers, District survey		$125,000	$18,500	$350,000	$185	$343	$18,500	$350,000	High price is per acre of stream	CA	$170	$316	$185	$343
CO	ELI 2007, District 2011,			$32,000	$100,000	$185	$343	$33,678	$105,245	2011->2014$	CO	$170	$316	$185	$343
CT	Composite; CT ILF Fact sheet 2013			$124,000	$470,448	$185	$343	$124,000	$470,448		CT	$170	$316	$185	$343
DE	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	DE	$170	$316	$185	$343
FL	Other Bankers; High end FL KRF ILF instrument 2013 - Estuarine resource			$35,000	$217,800	$185	$343	$35,000	$217,800	High end is non-tidal freshwater wetlands (FL KRF instrument 2013)	FL	$170	$316	$185	$343
GA	Other Bankers, District Survey, High end Georgia Land Trust ILF program instrument 2013 and application of SAS SOP	135/credit	150/credit	$12,000	$136,000	$878	$975	$12,000	$136,000	SAS SOP indicates stream compensation ratio of 6.5 credits/LF for NWPs; cost per credit *6.5 = cost/lf	GA	$106	$293	$115	$318
IA	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/MO data 2011$->2014$	IA	$170	$316	$185	$343
ID	Composite			$40,000	$40,000	$185	$343	$41,244	$41,244	IWR est based on MT data 2012$->2014$	ID	$170	$316	$185	$343
IL	District Survey, NMBA			$40,000	$200,000	$185	$343	$41,244	$206,221	2012$->2014$	IL	$170	$316	$185	$343
IN	ELI 2007			$40,000	$80,000	$185	$343	$45,671	$91,341	2007$->2014$	IN	$170	$316	$185	$343
KS	District 2011			$50,000	$50,000	$185	$343	$52,622	$52,622	2011$->2014$	KS	$170	$316	$185	$343
KY	PN, District Survey	$170	$396	$30,000	$64,600	$170	$396	$30,000	$64,600		KY	$170	$396	$185	$430
LA	District 2011			$15,000	$50,000	$185	$343	$15,787	$64,600	2011$->2014$ High end reflects updated fee schedule by LA DNR ILF for freshwater marsh restoration (Feb 2014 amendment to ILF Instrument). 64,600 from IWR verifiable spreadsheet	LA	$170	$316	$185	$343
MA	IWR based on MA ILF fact sheet May 2014	$100	$200	$124,000	$621,166	$100	$343	$124,000	$621,166	MA ILF Fact Sheet	MA	$170	$316	$185	$343
MD	ELI 2006, ELI 2007	$250		$11,000	$58,000	$293.57	$688	$12,917	$68,109	Assumed all 2006$->2014$	MD	$250	$634	$271	$688
ME	ME NRCP ILF rates 2013-2015			$254,390	$377,230	$185	$343	$254,390	$377,230	High end includes non-tidal wetland in coastal watersheds (ME NRCP 2013 ILF Fact Sheet	ME	$170	$316	$185	$343
MI	Composite			$40,000	$80,000	$185	$343	$40,000	$80,000	IWR est based on WI/IN	MI	$170	$316	$185	$343
MN	State, 2014 Fee & sales data -			$9,294	$76,443	$185	$343	$9,294	$76,443		MN	$170	$316	$185	$343
MO	District 2011	$90	$387	$15,000	$25,000	$95	$387	$15,787	$26,311	2011$->2014 $ high stream value MO SSTF ILF Instrument 2013 & MO Stream assessment method	MO	$90	$200	$98	$217
MS	District 2011, NMBA			$3,000	$25,000	$185	$343	$3,157	$26,311	Assumed all 2011$->2014$	MS	$170	$316	$185	$343
MT	NMBA			$40,000	$40,000	$185	$343	$41,244	$41,244	2012$->2014$	MT	$170	$316	$185	$343
NC	Non estuarine resource rates, NC EEP fee schedule 1 July 2014	$289	$381	$25,874	$69,736	$289	$381	$25,874	$69,736		NC	$256	$338	$278	$367
ND	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	ND	$170	$316	$185	$343
NE	District 2011			$15,000	$15,000	$185	$343	$15,787	$15,787	2011$->2014$	NE	$170	$316	$185	$343
NH	State, ILF,NH ARM Calculator 2013			$92,042	$128,330	$185	$343	$92,042	$128,330	NH ARM Calculator for Forested wetlands - 2014	NH	$170	$316	$185	$343
NJ	NMBA, Other			$80,000	$400,000	$185	$343	$82,489	$412,443	2012$->2014$	NJ	$170	$316	$185	$343
NM	Composite			$40,000	$60,000	$185	$343	$42,098	$63,147	IWR est based on CO (Eastern front) 2011$->2014$	NM	$170	$316	$185	$343
NV	Composite			$55,000	$65,000	$185	$343	$56,711	$67,022	IWR estimate based on UT data 2012$->2014$	NV	$170	$316	$185	$343
NY	District 2011, Susquehanna Headwaters Basin ILF Program Instrument 2013	$310	$420	$50,000	$91,580	$310	$420	$50,000	$94,000	Does not include estuarine resource prices. $94K from IWR verifiable spreadsheet	NY	$170	$316	$185	$343
OK	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	OH	$170	$316	$185	$343
OH	Other Bankers, District Survey, ILF Rates			$12,000	$50,000	$240	$450	$12,000	$72,000	$72,000 from IWR verifiable spreadsheet	OK	$170	$316	$185	$343
OR	OR DSL ILF Payment calculator 2014-2015	$42,339	$81,599	$54,500	$125,000	$185	$343	$54,500	$125,170	High-end is non-tidal wetland s using OR DSL Calculator, stream prices are calculated per acre of stream (OHW width * length). 125,170 from IWR verifiable spreadsheet	OR	$170	$316	$185	$343
PA	ELI 2007, ILF, State			$12,000	$15,000	$185	$343	$12,000	$15,000		PA	$170	$316	$185	$343
RI	Composite			$124,000	$160,000	$185	$343	$124,000	$160,000	IWR ave based on ME, NH, VT data	RI	$170	$316	$185	$343
SC	District 2011	$75	$200	$25,000	$100,000	$79	$217	$26,311	$105,245	2011$->2014$	SC	$75	$200	$81	$217
SD	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE data 2011$->2014$	SD	$170	$316	$185	$343
TN	ELI 2006, District Survey, Base fee from TN WF ILF program 2011	$50	$200	$25,000	$25,000	$54	$217	$25,000	$25,000		TN	$50	$200	$54	$217
TX	District Survey	$80		$15,000	$45,000	$80	$220	$15,000	$45,000		TX	$80	$203	$87	$220
UT	Other Bankers			$55,000	$65,000	$185	$343	$56,711	$67,022	2012$->2014$	UT	$170	$316	$185	$343
VA	District website, Other	$300	$900	$16,000	$140,000	$300	$977	$16,000	$140,000	Does not include estuarine resource prices; High end wetland from bankers	VA	$300	$900	$326	$977
VT	ILF			$110,000	$132,000	$185	$343	$110,000	$132,000		VT	$170	$316	$185	$343
WA	NMBA, District 2011, King County Mit. Reserves Program Instrument 2011			$32,949	$302,672	$185	$343	$34,677	$318,546	2011$->2014$	WA	$170	$316	$185	$343
WI	WI Wetland Cons Trust ILF Instrument 2014			$58,000	$61,000	$185	$343	$58,000	$61,000		WI	$170	$316	$185	$343
WV	District 2011, NMBA, WV DEP ILF Revenue & expenses through 2014	$400	$800	$30,000	$64,000	$400	$869	$30,000	$64,000	ILF/Bank costs	WV	$400	$800	$434	$869
WY	Composite			$15,000	$15,000	$185	$343	$15,787	$15,787	IWR est based on NE/CO data 2011$ ->2014$	WY	$170	$316	$185	$343
GU AS VI PR MP															

State	Increase in Wetland Mitigation (Acres)	Per Acre Unit Cost of Wetlands Mitigation		Increase in Stream Mitigation (Linear Feet)	Per Linear Foot Unit Cost of Stream Mitigation	
		Low	High		Low	High
AK	3.4	$5,500	$55,000	23	$1,000	$1,000
AL	23.7	$10,524	$21,049	2,259	$380	$964
AR	23.7	$2,105	$5,262	54,862	$185	$343
AZ	36.3	$9,000	$23,000	1,000	$185	$343
CA	122.1	$18,500	$350,000	723	$185	$343
CO	25.2	$33,678	$105,245	14	$185	$343
CT	0.5	$124,000	$470,448	-	$185	$343
DE	0.5	$41,244	$41,244	-	$185	$343
FL	93.5	$35,000	$217,800	47	$185	$343
GA	13.6	$12,000	$136,000	-	$878	$975
IA	6.8	$15,787	$15,787	162	$185	$343
ID	1.9	$41,244	$41,244	348	$185	$343
IL	170.1	$41,244	$206,221	3,920	$185	$343
IN	55.7	$45,671	$91,341	11,316	$185	$343
KS	33.9	$52,622	$52,622	714	$185	$343
KY	14.5	$30,000	$64,600	7,916	$170	$396
LA	6.3	$15,787	$64,600	44	$185	$343
MA	1.9	$124,000	$621,166	-	$100	$343
MD	7.3	$12,917	$68,109	-	$294	$688
ME	0.5	$254,390	$377,230	-	$185	$343
MI	0.5	$40,000	$80,000	-	$185	$343
MN	34.9	$9,294	$76,443	33	$185	$343
MO	4.4	$15,787	$26,311	62	$95	$387
MS	2.9	$3,157	$26,311	86	$185	$343
MT	89.6	$41,244	$41,244	793	$185	$343
NC	22.8	$25,874	$69,736	25	$289	$381
ND	1441.9	$15,787	$15,787	201	$185	$343
NE	32.5	$15,787	$15,787	148	$185	$343
NH	0.5	$92,042	$128,330	-	$185	$343
NJ	4.8	$82,489	$412,443	-	$185	$343
NM	0.5	$42,098	$63,147	-	$185	$343
NV	179.7	$56,711	$67,022	98	$185	$343
NY	145.3	$50,000	$94,000	249	$310	$420
OH	289.7	$12,000	$72,000	8,247	$240	$450
OK	2.4	$15,787	$15,787	1,038	$185	$343
OR	18.9	$54,500	$125,170	-	$185	$343
PA	57.7	$12,000	$15,000	1,039	$185	$343
RI	0.5	$124,000	$160,000	-	$185	$343
SC	144.9	$26,311	$105,245	972	$79	$217
SD	166.7	$15,787	$15,787	331	$185	$343
TN	18.9	$25,000	$25,000	69	$54	$217
TX	236.4	$15,000	$45,000	5,837	$80	$220
UT	37.3	$56,711	$67,022	-	$185	$343
VA	75.1	$16,000	$140,000	-	$300	$977
VT	1.5	$110,000	$132,000	-	$185	$343
WA	3.9	$34,677	$318,546	48	$185	$343
WI	10.7	$58,000	$61,000	10	$185	$343
WV	108.0	$30,000	$64,000	9,279	$400	$869
WY	6.8	$15,787	$15,787	-	$185	$343
Total	**3,781**			**111,916**		

Position	Occupational Code[1]	Mean Hourly Wage[1]	Benefits Adjustment Factor[3]	Year Adjustment[4]	Total Hourly Adjusted Wage
Private Industry					
Environmental Scientist	19-2041	$35.89	1.3	1.03	$47.96
Environmental Engineer	17-2081	$41.74			$55.77
Administrative Assistant	43-6011	$27.32			$36.51
Lawyer	23-1011	$66.41			$88.74
Economist	19-3011	$50.54			$67.53
Local Government					
Environmental Scientist	19-2041	$30.27	1.35	1.02	$41.88
Environmental Engineer	17-2081	$37.58			$51.99
Administrative Assistant	43-6011	$25.09			$34.71
Lawyer	23-1011	$46.13			$63.82
Economist	19-3011	$36.35			$50.29
State Government					
Environmental Scientist	19-2041	$28.50	1.35	1.02	$39.43
Environmental Engineer	17-2081	$35.26			$48.78
Administrative Assistant	43-6011	$21.42			$29.63
Lawyer	23-1011	$40.19			$55.60
Economist	19-3011	$30.78			$42.58
Federal Government					
Environmental Scientist	19-2041	$46.93	1.31	1.03	$63.18
Environmental Engineer	17-2081	$46.91			$63.16
Administrative Assistant	43-6011	$27.32			$36.79
Lawyer	23-1011	$62.87			$84.65
Economist	19-3011	$53.54			$72.08

1. Occupational codes and mean hourly wage from BLS (2014). Bureau of Labor Statistics (BLS), United States Department of Labor. 2014. Occupational Employment and Wages, May 2013. http://www.bls.gov/oes/current/oes_nat.htm

2. Hourly mean wage for administrative assistants working in the federal government not calculated in the May 2013 dataset. Hourly mean wage for private industry used for federal government rate.

3. Adjusted for benefits according to the Employment Cost for Employee Compensation Index for professional and related for private industry, local and state employees, and civilian workers. Average value across all three quarters of 2013. http://www.bls.gov/ncs/ect/

4. Escalated to 2014 dollars using the seasonally-adjusted Employment Cost Index for private industry (May 2013 (Q2) =118.4, 2014 Q3=121.7), state and local employees (May 2013 (Q2) =121.0, 2014 Q3=124.0), and civilian workers (May 2013 (Q2) =118.9, 2014 Q3=122.2)

FTE Amount for 401	Number of States	Total FTE	Total Costs (2014$)
0.5	25	12.5	$1,123,351
10	20	200	$17,973,613
20	5	100	$8,986,807
	Total:	312.5	$28,083,771
XX% Incremental Increase:		14.53125	$1,305,895

Average Hourly Annual Salary including benefits

$43.21	$89,868.07	$28,083,771.07	
$46.60	$96,925.43	$30,289,196.90	excluding admin assistant.

Enforcement Savings - Note this was cut from the analysis

1200 hours total

900	75% federal scientists and engineers	$56,853.00
300	25% federal lawyers	$25,393.66
		$82,246.66

402 Stormwater - $ millions

	Administrative Costs	Compliance Costs (low estimate)	Compliance Costs (high estimate)	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
1998 Values	5.3	545.0	678.7	540.5	686.0
Increment	0.2	25.3	31.6	25.1	31.9
30% Program Growth	0.3	32.9	41.0	32.7	41.5
2014 Values	0.5	47.8	59.6	47.5	60.2

Stormwater		
1998 Program Size	130000	
2011 Program Size	169000	
	1.3	Size Increase

402 CAFO - $ millions

	Administrative Costs	Compliance Costs	Monetized Benefits (low estimate)	Monetized Benefits (high estimate)
2001 Values	9.0	326.0	204.0	355.0
49% Program Size Decrea	4.4	159.7	100.0	174.0
3.59% Increment	0.2	7.4	4.6	8.1
2014 Values	0.3	9.9	6.2	10.8

CAFO		
2003 Program Size	15000	
2011 Program Size	7318	
	0.49	Size Decrease

402 Pesticide General Permit - $ millions

		Compliance Costs (low estimate)	Compliance Costs (high estimate)
2009 Values		10.18	11.22
Increment		0.47	0.52
Scale Up to Total Potential Universe		4.88	5.38
2014 Values		5.39	5.94

Original Universe	35,376	
Total Potential Univers	365000	
Size Increase	10.31773	

311 Oil Spill Prevention Plans - Costs

Weighted Average Unit C	2010$ from Prop	2014$	
Production (35% of facilities)	9,128	$9,910	$3,468,485.95
Storage (65% of facilities)	13,038	$14,155	$9,200,694.22
			$12,669,180.17

2010$ from Proposal	
9,128	9910
13,038	14155

							Horizon (years)	50	Horizon (years)						
							0.03	0.07	20						
Study (Year)	Acres	Sample Size	WTP Value from Study	WTP Value from Study Inflated to 2010$	WTP Value from Study Inflated to 2014$	Annual Value	NPV Over 50-Year Horizon (per household) 2014$		Annual WTP (per household) 2014$		One-Time WTP per household per acre 2014$		Annual HH WTP Per Acre 2014$		NWI Wetland Type
							3%	7%	3%	7%	3%	7%	3%	7%	
Emergent Wetlands															
Johnson and Linder (1986)	1,307,187	705	$289.90 (1986$)	$576.77	$626.18	No	$626.18	$626.18	$42.09	$59.11	$0.0005	$0.0005	$0.00003	$0.00005	Emergent
Loomis et al. (1991) 1	85,000	803	154 (1991$)	$246.55	$267.68	Yes	$6,887.22	$3,694.12	$267.68	$267.68	$0.0810	$0.0435	$0.00315	$0.00315	Emergent
Loomis et al. (1991) 2	125000	803	254 (1991$)	$406.65	$441.49	Yes	$11,359.43	$6,092.89	$441.49	$441.49	$0.0909	$0.0487	$0.00353	$0.00353	Emergent
Azevedo et al. (2000) 1	7000	1045	$10 (2000$)	$12.66	$13.75	No	$13.75	$13.75	$0.92	$1.30	$0.0020	$0.0020	$0.00013	$0.00019	Emergent
Azevedo et al. (2000) 2	32345	2094	$25(2000$)	$31.66	$34.37	No	$34.37	$34.37	$2.31	$3.24	$0.0011	$0.0011	$0.00007	$0.00010	Emergent
Roberts and Leitch (1997) 1	5000	575	$6.33 (1997$)	$8.60	$9.34	Yes	$240.23	$128.85	$9.34	$9.34	$0.0480	$0.0258	$0.00187	$0.00187	Emergent
Poor (1999)	41000	952	$21.05 (1996$)	$29.25	$31.76	Yes	$817.20	$438.32	$31.76	$31.76	$0.0199	$0.0107	$0.00077	$0.00077	Emergent
Mullarky and Bishop (1999) 1	110	117	$13.68(1999$)	$17.91	$19.44	Yes	$500.16	$268.27	$19.44	$19.44	$4.5469	$2.4389	$0.17672	$0.17672	Emergent
Mullarky and Bishop (1999) 2	110	117	$24.07 (1999$)		$34.20	Yes	$880.04	$472.03	$34.20	$34.20	$8.0003	$4.2912	$0.31094	$0.31094	
Forested															
Lant and Tobin (1989) 1	2109	7	24.249 (1989$)	$42.71	$46.30	Yes	$1,191.17	$638.91	$46.30	$46.30	$0.5648	$0.3029	$0.02195	$0.02195	Forested
Lant and Tobin (1989) 2	1108	16	54.5916 (1989$)	$96.00	$104.22	Yes	$2,681.66	$1,438.37	$104.22	$104.22	$2.4203	$1.2982	$0.09407	$0.09407	Forested
Blomquist and Whitehead (1998) 1	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 2	500	95		$6.14	$6.67	Yes	$171.51	$92.00	$6.67	$6.67	$0.3430	$0.1840	$0.01333	$0.01333	Forested
Blomquist and Whitehead (1998) 3	500	95		$2.82	$3.06	Yes	$78.77	$42.25	$3.06	$3.06	$0.1575	$0.0845	$0.00612	$0.00612	Forested
Blomquist and Whitehead (1998) 4	500	95		$18.70	$20.30	Yes	$522.36	$280.18	$20.30	$20.30	$1.0447	$0.5604	$0.04060	$0.04060	Forested
Dillman et al (1993) 1	2500	505	$16.74 (1992$)	$26.02	$28.25	No	$28.25	$28.25	$1.90	$2.67	$0.0113	$0.0113	$0.00076	$0.00107	Forested
Whitehead and Blomquist (1991) 1	5000	63	$10.90 (1989$)	$19.17	$20.81	Yes	$535.43	$287.19	$20.81	$20.81	$0.1071	$0.0574	$0.00416	$0.00416	Forested
Whitehead and Blomquist (1991) 2	5000	63	$7.35 (1989$)	$12.93	$14.03	Yes	$361.05	$193.66	$14.03	$14.03	$0.0722	$0.0387	$0.00281	$0.00281	Forested
Whitehead and Blomquist (1991) 3	5000	80	$5.09 (1989$)	$8.95	$9.72	Yes	$250.03	$134.11	$9.72	$9.72	$0.0500	$0.0268	$0.00194	$0.00194	Forested
Whitehead and Blomquist (1991) 4	5000	80	$3.75 (1989$)	$6.59	$12.58	Yes	$323.72	$173.63	$12.58	$12.58	$0.0647	$0.0347	$0.00252	$0.00252	Forested
Whitehead and Blomquist (1991) 5	5000	72	$16.61 (1989$)	$29.21	$31.71	Yes	$815.92	$437.64	$31.71	$31.71	$0.1632	$0.0875	$0.00634	$0.00634	Forested
Whitehead and Blomquist (1991) 6	5000	72	$8.13(1989$)	$14.30	$15.52	Yes	$399.36	$214.21	$15.52	$15.52	$0.0799	$0.0428	$0.00310	$0.00310	Forested

WTP - All Wetland Types - 3% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437	705	0.09509	-0.726846423
Loomis et al. (1991) 1	$0.0810	-2.5130	803	0.05415	-0.136088911
Loomis et al. (1991) 2	$0.0909	-2.3983		0.05415	-0.129876374
Azevedo et al. (2000) 1	$0.0020	-6.2328	1045	0.14095	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.8470	2094	0.28244	-1.933871391
Roberts and Leitch (1997) 1	$0.0480	-3.0356	575	0.07756	-0.235428364
Poor (1999)	$0.0199	-3.9154	952	0.12841	-0.502765067
Mullarky and Bishop (1999) 1	$4.5469	1.5145	117	0.00789	0.011949756
Mullarky and Bishop (1999) 2	$8.0003	2.0795		0.00789	0.016408123
Lant and Tobin (1989) 1	$0.5648	-0.5713	7	0.00094	-0.000539381
Lant and Tobin (1989) 2	$2.4203	0.8839	16	0.00216	0.001907485
Blomquist and Whitehead (1998) 1	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 2	$0.3430	-1.0699	95	0.01281	-0.013709794
Blomquist and Whitehead (1998) 3	$0.1575	-1.8480	95	0.01281	-0.023679898
Blomquist and Whitehead (1998) 4	$1.0447	0.0438	95	0.01281	0.000560692
Dillman et al (1993) 1	$0.0113	-4.4831	505	0.06811	-0.305362366
Whitehead and Blomquist (1991) 1	$0.1071	-2.2341	63	0.00425	-0.009492138
Whitehead and Blomquist (1991) 2	$0.0722	-2.6282		0.00425	-0.011166399
Whitehead and Blomquist (1991) 3	$0.0500	-2.9956	80	0.00540	-0.016161871
Whitehead and Blomquist (1991) 4	$0.0647	-2.7373		0.00540	-0.014768424
Whitehead and Blomquist (1991) 5	$0.1632	-1.8129	72	0.00486	-0.008802742
Whitehead and Blomquist (1991) 6	$0.0799	-2.5273		0.00486	-0.012271852
			7414		-4.9521944
				geomean	0.007067882 WTP Overall 3%

Azevedo	Year			
	0	2500	1.00	
	1	2427	0.97	
	2	2356	0.94	
	3	2288	0.92	
	4	2221	0.89	
	5	2157	0.86	
	6	2094	0.84	
	7	2033	0.81	
	8	1974	0.79	
	9	1916	0.77	
	10	1860	0.74	
	11	1806	0.72	
	12	1753	0.70	
	13	1702	0.68	
	14	1653	0.66	
	15	1605	0.64	
		32345	12.94	0.07729209 3091.683

WTP - All Wetland Types - 7% Disc Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.09509037	-0.726846423
Loomis et al. (1991) 1	$0.0435	-3.135910061	803	0.054154303	-0.169823023
Loomis et al. (1991) 2	$0.0487	-3.021190877		0.054154303	-0.163610485
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.140949555	-0.878509164
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.28243863	-1.933871391
Roberts and Leitch (1997) 1	$0.0258	-3.658518632	575	0.077555975	-0.28373998
Poor (1999)	$0.0107	-4.538367179	952	0.128405719	-0.5827523
Mullarky and Bishop (1999) 1	$2.4389	0.891527083	117	0.007890477	0.007034574
Mullarky and Bishop (1999) 2	$4.2912	1.456558422		0.007890477	0.011492941
Lant and Tobin (1989) 1	$0.3029	-1.1942071	7	0.00094416	-0.001127522
Lant and Tobin (1989) 2	$1.2982	0.260954858	16	0.002158079	0.000563161
Blomquist and Whitehead (1998) 1	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 2	$0.1840	-1.692867001	95	0.012813596	-0.021691714
Blomquist and Whitehead (1998) 3	$0.0845	-2.470954858	95	0.012813596	-0.031661817
Blomquist and Whitehead (1998) 4	$0.5604	-0.579168219	95	0.012813596	-0.007421228
Dillman et al (1993) 1	$0.0113	-4.483082337	505	0.068114378	-0.305362366
Whitehead and Blomquist (1991) 1	$0.0574	-2.857043702	63	0.004248719	-0.012138775
Whitehead and Blomquist (1991) 2	$0.0387	-3.251106178		0.004248719	-0.013813035
Whitehead and Blomquist (1991) 3	$0.0268	-3.61852866	80	0.005395198	-0.01952268
Whitehead and Blomquist (1991) 4	$0.0347	-3.360253142		0.005395198	-0.018129232
Whitehead and Blomquist (1991) 5	$0.0875	-2.435801567	72	0.004855678	-0.011827469
Whitehead and Blomquist (1991) 6	$0.0428	-3.150245567		0.004855678	-0.01529658
			7414		-5.209716322
				geomean	0.005463223 WTP Overall 7%

WTP-Emergent - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	$0.0005	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	$0.0810	-2.512984276	803	0.063821332	-0.160382004
Loomis et al. (1991) 2	$0.0909	-2.398265092		0.063821332	-0.153060473
Azevedo et al. (2000) 1	$0.0020	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	$0.0011	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	$0.0480	-3.035592847	575	0.091400413	-0.277454441
Poor (1999)	$0.0199	-3.915441395	952	0.151327293	-0.592513147
Mullarky and Bishop (1999) 2	$8.0003	2.079484207	117	0.009298999	0.019337121
Mullarky and Bishop (1999) 1	$4.5469	1.514452867		0.009298999	0.014082895
			6291		-5.321000828 0.004888
					WTP Emergent 3%

WTP-Emergent - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Johnson and Linder (1986)	0.000479032	-7.6437438	705	0.112064855	-0.856595037
Loomis et al. (1991) 1	0.043460184	-3.135910061	803	0.063821332	-0.200137957
Loomis et al. (1991) 2	0.048743137	-3.021190877		0.063821332	-0.192816426
Azevedo et al. (2000) 1	0.001963962	-6.232791331	1045	0.166110316	-1.03533094
Azevedo et al. (2000) 2	0.001062586	-6.847049899	2094	0.332856462	-2.279084802
Roberts and Leitch (1997) 1	0.02577066	-3.658518632	575	0.091400413	-0.334390115
Poor (1999)	0.010690849	-4.538367179	952	0.151327293	-0.68677882
Mullarky and Bishop (1999) 2	4.291165706	1.456558422	117	0.009298999	0.013544535
Mullarky and Bishop (1999) 1	2.438851137	0.891527083		0.009298999	0.008290309
			6291		-5.563299253 0.003836
					WTP Emergent 7%

WTP Forested - 3% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.564801286	-0.571281316	7	0.006233304	-0.00356097
Lant and Tobin (1989) 2	2.420273723	0.883880642	16	0.014247551	0.012593135
Blomquist and Whitehead (1998) 1	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 2	0.343028681	-1.069941216	95	0.084594835	-0.090511501
Blomquist and Whitehead (1998) 3	0.157547375	-1.848029073	95	0.084594835	-0.156333715
Blomquist and Whitehead (1998) 4	1.044729046	0.043757565	95	0.084594835	0.003701664
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.107086547	-2.234117917	63	0.028049866	-0.062666709
Whitehead and Blomquist (1991) 2	0.072209736	-2.628180393		0.028049866	-0.073720109
Whitehead and Blomquist (1991) 3	0.05000647	-2.995602876	80	0.035618878	-0.106700013
Whitehead and Blomquist (1991) 4	0.064743151	-2.737327358		0.035618878	-0.097500529
Whitehead and Blomquist (1991) 5	0.163184179	-1.812875783	72	0.03205699	-0.058115341
Whitehead and Blomquist (1991) 6	0.07987281	-2.527319783		0.03205699	-0.081018266
			1123		-2.8861559 0.05579
					WTP Forested 3%

WTP Forested - 7% Discount Rate

Code	WTP(HH,A) = One-Time WTP per Household per Acre	Log value = Natural Log of WTP(HH,A)	Sample Size	Weight=Study Sample Size/Total Regional Sample Size	Log Value x Weight
Lant and Tobin (1989) 1	0.302944063	-1.1942071	7	0.006233304	-0.007443855
Lant and Tobin (1989) 2	1.298169062	0.260954858	16	0.014247551	0.003717968
Blomquist and Whitehead (1998) 1	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 2	0.183991264	-1.692867001	95	0.084594835	-0.143207805
Blomquist and Whitehead (1998) 3	0.084504131	-2.470954858	95	0.084594835	-0.209030019
Blomquist and Whitehead (1998) 4	0.560364273	-0.579168219	95	0.084594835	-0.04899464
Dillman et al (1993) 1	0.011298534	-4.483082337	505	0.449688335	-2.015989831
Whitehead and Blomquist (1991) 1	0.057438314	-2.857043702	63	0.028049866	-0.080139694
Whitehead and Blomquist (1991) 2	0.03873134	-3.251106178		0.028049866	-0.091193094
Whitehead and Blomquist (1991) 3	0.026822112	-3.61852866	80	0.035618878	-0.128887931
Whitehead and Blomquist (1991) 4	0.034726467	-3.360253142		0.035618878	-0.119688447
Whitehead and Blomquist (1991) 5	0.08752756	-2.435801567	72	0.03205699	-0.078084467
Whitehead and Blomquist (1991) 6	0.042841605	-3.150245567		0.03205699	-0.100987391
			1123		-3.228959226 0.039599
					WTP Forested 7%

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.97	0.73	0.005	0.041	$11,696	$11,696
KS	1,112,096	10.80	6.16	0.053	0.344	$440,921	$440,921
NE	721,130	13.37	2.86	0.065	0.160	$162,362	$162,362
OK	1,460,450	0.23	0.99	0.001	0.055	$81,958	$81,958
Central Plains	**3,293,676**	**24.39**	**10.01**	**0.033**	**0.175**	**$685,241**	$685,241
AR	1,147,084	0.38	11.49	0.002	0.641	$737,172	$737,172
LA	1,728,360	0.97	2.18	0.005	0.122	$218,666	$218,666
MS	1,115,768	0.06	1.39	0.000	0.078	$86,950	$86,950
TN	2,493,552	0.60	8.85	0.003	0.494	$1,238,475	$1,238,475
TX	8,922,933	64.02	54.20	0.313	3.024	$29,774,180	$29,774,180
Delta and Gulf	**15,407,697**	**66.03**	**78.11**	**0.182**	**1.898**	**32,055,443**	$32,055,443
IL	4,836,972	16.74	68.29	0.082	3.810	$18,825,177	$18,825,177
IN	2,502,154	6.20	21.66	0.030	1.208	$3,099,090	$3,099,090
KY	1,719,965	0.61	6.65	0.003	0.371	$643,700	$643,700
MI	3,872,508	0.02	0.22	0.000	0.012	$47,693	$47,693
MN	2,087,227	5.05	12.40	0.025	0.692	$1,494,952	$1,494,952
MO	2,375,611	0.42	1.76	0.002	0.098	$237,649	$237,649
OH	4,603,435	29.37	115.49	0.144	6.443	$30,322,410	$30,322,410
WI	2,279,768	1.11	4.22	0.005	0.236	$549,249	$549,249
Midwest	**24,277,640**	**59.52**	**230.69**	**0.050**	**2.225**	**55,219,920**	$55,219,920
AZ	2,380,990	3.27	14.90	0.016	0.831	$2,017,314	$2,017,314
CO	1,972,868	10.52	2.08	0.051	0.116	$330,009	$330,009
ID	579,408	0.74	0.23	0.004	0.013	$9,428	$9,428
NM	791,395	0.14	0.11	0.001	0.006	$5,201	$5,201
NV	1,006,250	67.73	22.14	0.331	1.235	$1,576,161	$1,576,161
UT	877,692	16.59	2.07	0.081	0.115	$172,377	$172,377
WY	226,879	2.67	0.73	0.013	0.040	$12,136	$12,136
Mountain	**7,835,482**	**101.65**	**42.24**	**0.070**	**0.456**	**4,122,627**	$4,122,627
CT	1,371,087	0.02	0.22	0.000	0.012	$17,079	$17,079
DE	342,297	0.02	0.23	0.000	0.013	$4,335	$4,335
MA	2,547,075	0.09	0.88	0.000	0.049	$125,882	$125,882
MD	2,156,411	0.29	3.35	0.001	0.187	$405,647	$405,647
ME	557,219	0.03	0.22	0.000	0.012	$6,821	$6,821
NH	518,973	0.04	0.20	0.000	0.011	$6,021	$6,021
NJ	3,214,360	0.24	2.19	0.001	0.122	$395,782	$395,782
NY	7,317,755	11.67	61.00	0.057	3.403	$25,322,036	$25,322,036
PA	5,018,904	4.76	24.07	0.023	1.343	$6,856,740	$6,856,740
RI	413,600	0.01	0.23	0.000	0.013	$5,320	$5,320
VT	256,442	0.15	0.58	0.001	0.032	$8,418	$8,418
WV	763,831	19.58	34.44	0.096	1.921	$1,540,731	$1,540,731
Northeast	**24,477,954**	**36.89**	**127.60**	**0.025**	**1.392**	**34,694,811**	$34,694,811
CA	12,577,498	43.61	17.44	0.213	0.973	$14,916,078	$14,916,078
OR	1,518,938	7.52	1.93	0.037	0.108	$219,415	$219,415
WA	2,620,076	1.01	0.93	0.005	0.052	$148,813	$148,813
Pacific	**16,716,512**	**52.14**	**20.30**	**0.16**	**0.75**	**15,284,306**	$15,284,306
IA	1,221,576	1.63	1.76	0.008	0.098	$129,748	$129,748
MT	409,607	38.39	6.43	0.188	0.359	$223,805	$223,805
ND	281,192	709.69	11.24	3.469	0.627	$1,151,814	$1,151,814
SD	322,282	81.11	2.22	0.396	0.124	$167,700	$167,700
Prairie Potholes	**2,234,657**	**830.81**	**21.66**	**0.53**	**0.22**	**1,673,066**	$1,673,066
AL	1,883,791	0.44	11.43	0.002	0.638	$1,205,681	$1,205,681
FL	7,420,802	14.61	32.14	0.071	1.793	$13,837,717	$13,837,717
GA	3,585,584	0.37	6.41	0.002	0.358	$1,289,486	$1,289,486
NC	3,745,155	0.34	11.05	0.002	0.616	$2,314,426	$2,314,426
SC	1,801,181	4.46	67.97	0.022	3.792	$6,869,237	$6,869,237
VA	3,056,058	3.96	33.59	0.019	1.874	$5,786,562	$5,786,562
Southeast	**21,492,571**	**24.17**	**162.60**	**0.03**	**1.43**	**31,303,109**	$31,303,109

State-Level Approach Summed Over Regions - 3%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.005	0.041	$11,696
Central Plains	3,293,676	24.4	10.0	0.033	0.175	$685,241
Delta and Gulf	15,407,697	66.0	78.1	0.182	1.898	$32,055,443
Midwest	24,277,640	59.5	230.7	0.050	2.225	$55,219,920
Mountain	7,835,482	101.7	42.2	0.070	0.456	$4,122,627
Northeast	24,477,954	36.9	127.6	0.025	1.392	$34,694,811
Pacific	16,716,512	52.1	20.3	0.164	0.750	$15,284,306
Prairie Potholes	2,234,657	830.8	21.7	0.532	0.216	$1,673,066
Southeast	21,492,571	24.2	162.6	0.030	1.426	$31,303,109
Total						$175,050,218

Regional Approach - 3%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.005	0.041	$11,696
Central Plains	3,293,676	24.4	10.0	0.119	0.559	$2,232,273
Delta and Gulf	15,407,697	66.0	78.1	0.323	4.358	$72,116,955
Midwest	24,277,640	59.5	230.7	0.291	12.870	$319,522,364
Mountain	7,835,482	101.7	42.2	0.497	2.357	$22,359,615
Northeast	24,477,954	36.9	127.6	0.180	7.119	$178,663,704
Pacific	16,716,512	52.1	20.3	0.255	1.132	$23,188,873
Prairie Potholes	2,234,657	830.8	21.7	4.061	1.208	$11,774,714
Southeast	21,492,571	24.2	162.6	0.118	9.071	$197,507,516
Total						$827,377,710

Blended Approach - 3% Discount Rate

Region	# Households	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.005	0.041	$11,696
Central Plains	3,293,676	24.4	10.0	0.076	0.367	$1,458,757
Delta and Gulf	15,407,697	66.0	78.1	0.253	3.128	$52,086,199
Midwest	24,277,640	59.5	230.7	0.170	7.548	$187,371,142
Mountain	7,835,482	101.7	42.2	0.283	1.406	$13,241,121
Northeast	24,477,954	36.9	127.6	0.103	4.255	$106,679,257
Pacific	16,716,512	52.1	20.3	0.210	0.941	$19,236,590
Prairie Potholes	2,234,657	830.8	21.7	2.297	0.712	$6,723,890
Southeast	21,492,571	24.2	162.6	0.074	5.249	$114,405,313
Total						$501,213,964

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forest	Total WTP	Check
AK	258,058	0.97	0.73	0.004	0.029	$8,393	$8,393
KS	1,112,096	10.80	6.16	0.041	0.244	$317,360	$317,360
NE	721,130	13.37	2.86	0.051	0.113	$118,776	$118,776
OK	1,460,450	0.23	0.99	0.001	0.039	$58,292	$58,292
Central Plains	**3,293,676**	**24.39**	**10.01**	**0.026**	**0.125**	**$494,429**	$494,429
AR	1,147,084	0.38	11.49	0.001	0.455	$523,390	$523,390
LA	1,728,360	0.97	2.18	0.004	0.086	$155,817	$155,817
MS	1,115,768	0.06	1.39	0.000	0.055	$61,741	$61,741
TN	2,493,552	0.60	8.85	0.002	0.350	$879,589	$879,589
TX	8,922,933	64.02	54.20	0.246	2.146	$21,342,573	$21,342,573
Delta and Gulf	**15,407,697**	**66.03**	**78.11**	**0.143**	**1.347**	**22,963,109**	$22,963,109
IL	4,836,972	16.74	68.29	0.064	2.704	$13,391,384	$13,391,384
IN	2,502,154	6.20	21.66	0.024	0.858	$2,205,357	$2,205,357
KY	1,719,965	0.61	6.65	0.002	0.264	$457,271	$457,271
MI	3,872,508	0.02	0.22	0.000	0.009	$33,885	$33,885
MN	2,087,227	5.05	12.40	0.019	0.491	$1,064,947	$1,064,947
MO	2,375,611	0.42	1.76	0.002	0.070	$169,048	$169,048
OH	4,603,435	29.37	115.49	0.113	4.573	$21,571,770	$21,571,770
WI	2,279,768	1.11	4.22	0.004	0.167	$390,772	$390,772
Midwest	**24,277,640**	**59.52**	**230.69**	**0.039**	**1.579**	**39,284,433**	$39,284,433
AZ	2,380,990	3.27	14.90	0.013	0.590	$1,434,699	$1,434,699
CO	1,972,868	10.52	2.08	0.040	0.082	$241,846	$241,846
ID	579,408	0.74	0.23	0.003	0.009	$6,850	$6,850
NM	791,395	0.14	0.11	0.001	0.004	$3,731	$3,731
NV	1,006,250	67.73	22.14	0.260	0.877	$1,143,724	$1,143,724
UT	877,692	16.59	2.07	0.064	0.082	$127,689	$127,689
WY	226,879	2.67	0.73	0.010	0.029	$8,836	$8,836
Mountain	**7,835,482**	**101.65**	**42.24**	**0.055**	**0.324**	**2,967,375**	$2,967,375
CT	1,371,087	0.02	0.22	0.000	0.009	$12,132	$12,132
DE	342,297	0.02	0.23	0.000	0.009	$3,079	$3,079
MA	2,547,075	0.09	0.88	0.000	0.035	$89,433	$89,433
MD	2,156,411	0.29	3.35	0.001	0.133	$288,146	$288,146
ME	557,219	0.03	0.22	0.000	0.009	$4,846	$4,846
NH	518,973	0.04	0.20	0.000	0.008	$4,280	$4,280
NJ	3,214,360	0.24	2.19	0.001	0.087	$281,196	$281,196
NY	7,317,755	11.67	61.00	0.045	2.416	$18,004,351	$18,004,351
PA	5,018,904	4.76	24.07	0.018	0.953	$4,875,518	$4,875,518
RI	413,600	0.01	0.23	0.000	0.009	$3,778	$3,778
VT	256,442	0.15	0.58	0.001	0.023	$5,989	$5,989
WV	763,831	19.58	34.44	0.075	1.364	$1,099,063	$1,099,063
Northeast	**24,477,954**	**36.89**	**127.60**	**0.020**	**0.988**	**24,671,812**	$24,671,812
CA	12,577,498	43.61	17.44	0.167	0.690	$10,788,296	$10,788,296
OR	1,518,938	7.52	1.93	0.029	0.076	$159,924	$159,924
WA	2,620,076	1.01	0.93	0.004	0.037	$106,593	$106,593
Pacific	**16,716,512**	**52.14**	**20.30**	**0.13**	**0.53**	**11,054,814**	$11,054,814
IA	1,221,576	1.63	1.76	0.006	0.070	$92,823	$92,823
MT	409,607	38.39	6.43	0.147	0.255	$164,619	$164,619
ND	281,192	709.69	11.24	2.722	0.445	$890,731	$890,731
SD	322,282	81.11	2.22	0.311	0.088	$128,618	$128,618
Prairie Potholes	**2,234,657**	**830.81**	**21.66**	**0.42**	**0.15**	**1,276,791**	$1,276,791
AL	1,883,791	0.44	11.43	0.002	0.453	$856,067	$856,067
FL	7,420,802	14.61	32.14	0.056	1.273	$9,861,473	$9,861,473
GA	3,585,584	0.37	6.41	0.001	0.254	$915,734	$915,734
NC	3,745,155	0.34	11.05	0.001	0.437	$1,643,193	$1,643,193
SC	1,801,181	4.46	67.97	0.017	2.691	$4,878,582	$4,878,582
VA	3,056,058	3.96	33.59	0.015	1.330	$4,111,608	$4,111,608
Southeast	**21,492,571**	**24.17**	**162.60**	**0.02**	**1.01**	**22,266,656**	$22,266,656

State-Level Approach Summed Over Regions - 7%

Region	# HH	Acres Emergent	Acres Forested	Weighted Avg HH WTP Emergent	Weighted Avg HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.004	0.029	$8,393
Central Plains	3,293,676	24.4	10.0	0.026	0.125	$494,429
Delta and Gulf	15,407,697	66.0	78.1	0.143	1.347	$22,963,109
Midwest	24,277,640	59.5	230.7	0.039	1.579	$39,284,433
Mountain	7,835,482	101.7	42.2	0.055	0.324	$2,967,375
Northeast	24,477,954	36.9	127.6	0.020	0.988	$24,671,812
Pacific	16,716,512	52.1	20.3	0.129	0.532	$11,054,814
Prairie Potholes	2,234,657	830.8	21.7	0.418	0.154	$1,276,791
Southeast	21,492,571	24.2	162.6	0.024	1.012	$22,266,656
Total						$124,987,812

Regional Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.004	0.029	$8,393
Central Plains	3,293,676	24.4	10.0	0.094	0.396	$1,613,881
Delta and Gulf	15,407,697	66.0	78.1	0.253	3.093	$51,560,168
Midwest	24,277,640	59.5	230.7	0.228	9.135	$227,319,944
Mountain	7,835,482	101.7	42.2	0.390	1.673	$16,162,515
Northeast	24,477,954	36.9	127.6	0.142	5.053	$127,142,749
Pacific	16,716,512	52.1	20.3	0.200	0.804	$16,778,627
Prairie Potholes	2,234,657	830.8	21.7	3.187	0.858	$9,038,435
Southeast	21,492,571	24.2	162.6	0.093	6.439	$140,377,033
Total						$590,001,745

Blended Approach - 7%

Region	# HH	Acres Emergent	Acres Forested	HH WTP Emergent	HH WTP Forested	Total WTP
AK	258,058	1.0	0.7	0.004	0.029	$8,393
Central Plains	3,293,676	24.4	10.0	0.060	0.260	$1,054,155
Delta and Gulf	15,407,697	66.0	78.1	0.198	2.220	$37,261,639
Midwest	24,277,640	59.5	230.7	0.134	5.357	$133,302,188
Mountain	7,835,482	101.7	42.2	0.222	0.998	$9,564,945
Northeast	24,477,954	36.9	127.6	0.081	3.020	$75,907,281
Pacific	16,716,512	52.1	20.3	0.165	0.668	$13,916,720
Prairie Potholes	2,234,657	830.8	21.7	1.802	0.506	$5,157,613
Southeast	21,492,571	24.2	162.6	0.058	3.726	$81,321,845
Total						$357,494,779

Source: U.S. Census Bureau, 2010 Census Summary File 1
http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf

Overall WTP	3%	7%
Emergent	$0.0049	$0.0038
Forested	$0.06	$0.04

STATE	Households	Total New Impacted Acres by State	**Freshwater Emergent Proportions**	**Forested Emergent Proportions**	New Acreage Emergent	New Acreage Forested	Benefits by State Total Wetland Acres 3%	Benefits by State Total Wetland Acres 7%	3% WTP Per HH by Type Emergent	3% WTP Per HH by Type Forested	7% WTP Per HH by Type Emergent	7% WTP Per HH by Type Forested	Overall WTP per HH Emergent	Overall WTP per HH Forested	Overall WTP per HH 3%	Overall WTP per HH 7%	**Total Benefits Check** 3%	**Total Benefits Check** 7%
AK	258,058	1.7	0.5709	0.4291	1.0	0.7	$11,696	$8,393	$1,221	$10,475	$0.005	$0.041	$958	$7,435	$0.004	$0.029	$0.05	$0.03	$11,696	$8,393
AL	1,883,791	11.9	0.0368	0.9632	0.4	11.4	$1,205,681	$856,067	$4,017	$1,201,664	$0.002	$0.638	$3,153	$852,914	$0.002	$0.453	$0.64	$0.45	$1,205,681	$856,067
AR	1,147,084	11.9	0.0324	0.9676	0.4	11.5	$737,172	$523,390	$2,158	$735,014	$0.002	$0.641	$1,694	$521,697	$0.001	$0.455	$0.64	$0.46	$737,172	$523,390
AZ	2,380,990	18.2	0.1799	0.8201	3.3	14.9	$2,017,314	$1,434,699	$38,038	$1,979,276	$0.016	$0.831	$29,853	$1,404,846	$0.013	$0.590	$0.85	$0.60	$2,017,314	$1,434,699
CA	12,577,498	61.0	0.7144	0.2856	43.6	17.4	$14,916,078	$10,788,296	$2,681,028	$12,235,050	$0.213	$0.973	$2,104,130	$8,684,166	$0.167	$0.690	$1.19	$0.86	$14,916,078	$10,788,296
CO	1,972,868	12.6	0.8352	0.1648	10.5	2.1	$330,009	$241,846	$101,449	$228,561	$0.051	$0.116	$79,619	$162,227	$0.040	$0.082	$0.17	$0.12	$330,009	$241,846
CT	1,371,087	0.2	0.0859	0.9141	0.0	0.2	$17,079	$12,132	$139	$16,939	$0.000	$0.012	$109	$12,023	$0.000	$0.009	$0.01	$0.01	$17,079	$12,132
DE	342,297	0.2	0.0689	0.9311	0.0	0.2	$4,335	$3,079	$28	$4,308	$0.000	$0.013	$22	$3,057	$0.000	$0.009	$0.01	$0.01	$4,335	$3,079
FL	7,420,802	46.8	0.3125	0.6875	14.6	32.1	$13,837,717	$9,861,473	$529,936	$13,307,781	$0.071	$1.793	$415,905	$9,445,568	$0.056	$1.273	$1.86	$1.33	$13,837,717	$9,861,473
GA	3,585,584	6.8	0.0544	0.9456	0.4	6.4	$1,289,486	$915,734	$6,470	$1,283,016	$0.002	$0.358	$5,078	$910,656	$0.001	$0.254	$0.36	$0.26	$1,289,486	$915,734
IA	1,221,576	3.4	0.4808	0.5192	1.6	1.8	$129,748	$92,823	$9,736	$120,012	$0.008	$0.098	$7,641	$85,182	$0.006	$0.070	$0.11	$0.08	$129,748	$92,823
ID	579,408	1.0	0.7661	0.2339	0.7	0.2	$9,428	$6,850	$2,102	$7,326	$0.004	$0.013	$1,650	$5,200	$0.003	$0.009	$0.02	$0.01	$9,428	$6,850
IL	4,836,972	85.0	0.1968	0.8032	16.7	68.3	$18,825,177	$13,391,384	$395,659	$18,429,518	$0.082	$3.810	$310,522	$13,080,862	$0.064	$2.704	$3.89	$2.77	$18,825,177	$13,391,384
IN	2,502,154	27.9	0.2226	0.7774	6.2	21.7	$3,099,090	$2,205,357	$75,844	$3,023,247	$0.030	$1.208	$59,524	$2,145,833	$0.024	$0.858	$1.24	$0.88	$3,099,090	$2,205,357
KS	1,112,096	17.0	0.6367	0.3633	10.8	6.2	$440,921	$317,360	$58,688	$382,233	$0.053	$0.344	$46,060	$271,300	$0.041	$0.244	$0.40	$0.29	$440,921	$317,360
KY	1,719,965	7.3	0.0843	0.9157	0.6	6.7	$643,700	$457,271	$5,153	$638,547	$0.003	$0.371	$4,044	$453,227	$0.002	$0.264	$0.37	$0.27	$643,700	$457,271
LA	1,728,360	3.1	0.3068	0.6932	1.0	2.2	$218,666	$155,817	$8,162	$210,504	$0.005	$0.122	$6,406	$149,411	$0.004	$0.086	$0.13	$0.09	$218,666	$155,817
MA	2,547,075	1.0	0.0940	0.9060	0.1	0.9	$125,882	$89,433	$1,134	$124,747	$0.000	$0.049	$890	$88,543	$0.000	$0.035	$0.05	$0.04	$125,882	$89,433
MD	2,156,411	3.6	0.0790	0.9210	0.3	3.3	$405,647	$288,146	$3,026	$402,620	$0.001	$0.187	$2,375	$285,771	$0.001	$0.133	$0.19	$0.13	$405,647	$288,146
ME	557,219	0.2	0.1034	0.8966	0.0	0.2	$6,821	$4,846	$68	$6,752	$0.000	$0.012	$54	$4,793	$0.000	$0.009	$0.01	$0.01	$6,821	$4,846
MI	3,872,508	0.2	0.0973	0.9027	0.0	0.2	$47,693	$33,885	$446	$47,247	$0.000	$0.012	$350	$33,535	$0.000	$0.009	$0.01	$0.01	$47,693	$33,885
MN	2,087,227	17.4	0.2893	0.7107	5.0	12.4	$1,494,952	$1,064,947	$51,478	$1,443,473	$0.025	$0.692	$40,401	$1,024,545	$0.019	$0.491	$0.72	$0.51	$1,494,952	$1,064,947
MO	2,375,611	2.2	0.1946	0.8054	0.4	1.8	$237,649	$169,048	$4,927	$232,722	$0.002	$0.098	$3,867	$165,181	$0.002	$0.070	$0.10	$0.07	$237,649	$169,048
MS	1,115,768	1.5	0.0427	0.9573	0.1	1.4	$86,950	$61,741	$339	$86,611	$0.000	$0.078	$266	$61,475	$0.000	$0.055	$0.08	$0.06	$86,950	$61,741
MT	409,607	44.8	0.8565	0.1435	38.4	6.4	$223,805	$164,619	$76,851	$146,954	$0.188	$0.359	$60,314	$104,305	$0.147	$0.255	$0.55	$0.40	$223,805	$164,619
NC	3,745,155	11.4	0.0297	0.9703	0.3	11.0	$2,314,426	$1,643,193	$6,196	$2,308,230	$0.002	$0.616	$4,863	$1,638,330	$0.001	$0.437	$0.62	$0.44	$2,314,426	$1,643,193
ND	281,192	720.9	0.9844	0.0156	709.7	11.2	$1,151,814	$890,731	$975,411	$176,404	$3.469	$0.627	$765,524	$125,207	$2.722	$0.445	$4.10	$3.17	$1,151,814	$890,731
NE	721,130	16.2	0.8235	0.1765	13.4	2.9	$162,362	$118,776	$47,112	$115,250	$0.065	$0.160	$36,975	$81,802	$0.051	$0.113	$0.23	$0.16	$162,362	$118,776
NH	518,973	0.2	0.1552	0.8448	0.0	0.2	$6,021	$4,280	$95	$5,925	$0.000	$0.011	$75	$4,206	$0.000	$0.008	$0.01	$0.01	$6,021	$4,280
NJ	3,214,360	2.4	0.0975	0.9025	0.2	2.2	$395,782	$281,196	$3,710	$392,072	$0.001	$0.122	$2,912	$278,284	$0.001	$0.087	$0.12	$0.09	$395,782	$281,196
NM	791,395	0.2	0.5631	0.4369	0.1	0.1	$5,201	$3,731	$528	$4,673	$0.001	$0.006	$414	$3,317	$0.001	$0.004	$0.01	$0.005	$5,201	$3,731
NV	1,006,250	89.9	0.7536	0.2464	67.7	22.1	$1,576,161	$1,143,724	$333,134	$1,243,028	$0.331	$1.235	$261,451	$882,273	$0.260	$0.877	$1.57	$1.14	$1,576,161	$1,143,724
NY	7,317,755	72.7	0.1606	0.8394	11.7	61.0	$25,322,036	$18,004,351	$417,510	$24,904,526	$0.057	$3.403	$327,671	$17,676,680	$0.045	$2.416	$3.46	$2.46	$25,322,036	$18,004,351
OH	4,603,435	144.9	0.2028	0.7972	29.4	115.5	$30,322,410	$21,571,770	$660,898	$29,661,512	$0.144	$6.443	$518,688	$21,053,082	$0.113	$4.573	$6.59	$4.69	$30,322,410	$21,571,770
OK	1,460,450	1.2	0.1858	0.8142	0.2	1.0	$81,958	$58,292	$1,607	$80,351	$0.001	$0.055	$1,261	$57,031	$0.001	$0.039	$0.06	$0.04	$81,958	$58,292
OR	1,518,938	9.4	0.7956	0.2044	7.5	1.9	$219,415	$159,924	$55,809	$163,606	$0.037	$0.108	$43,800	$116,124	$0.029	$0.076	$0.14	$0.11	$219,415	$159,924
PA	5,018,904	28.8	0.1650	0.8350	4.8	24.1	$6,856,740	$4,875,518	$116,682	$6,740,057	$0.023	$1.343	$91,575	$4,783,943	$0.018	$0.953	$1.37	$0.97	$6,856,740	$4,875,518
RI	413,600	0.2	0.0529	0.9471	0.0	0.2	$5,320	$3,778	$26	$5,294	$0.000	$0.013	$20	$3,758	$0.000	$0.009	$0.01	$0.01	$5,320	$3,778
SC	1,801,181	72.4	0.0616	0.9384	4.5	68.0	$6,869,237	$4,878,582	$39,308	$6,829,929	$0.022	$3.792	$30,849	$4,847,732	$0.017	$2.691	$3.81	$2.71	$6,869,237	$4,878,582
SD	322,282	83.3	0.9734	0.0266	81.1	2.2	$167,700	$128,618	$127,774	$39,925	$0.396	$0.124	$100,280	$28,338	$0.311	$0.088	$0.52	$0.40	$167,700	$128,618
TN	2,493,552	9.4	0.0632	0.9368	0.6	8.9	$1,238,475	$879,589	$7,283	$1,231,192	$0.003	$0.494	$5,716	$873,873	$0.002	$0.350	$0.50	$0.35	$1,238,475	$879,589
TX	8,922,933	118.2	0.5415	0.4585	64.0	54.2	$29,774,180	$21,342,573	$2,791,974	$26,982,205	$0.313	$3.024	$2,191,203	$19,151,370	$0.246	$2.146	$3.34	$2.39	$29,774,180	$21,342,573
UT	877,692	18.7	0.8892	0.1108	16.6	2.1	$172,377	$127,689	$71,154	$101,223	$0.081	$0.115	$55,843	$71,846	$0.064	$0.082	$0.20	$0.15	$172,377	$127,689
VA	3,056,058	37.5	0.1054	0.8946	4.0	33.6	$5,786,562	$4,111,608	$59,091	$5,727,471	$0.019	$1.874	$46,376	$4,065,231	$0.015	$1.330	$1.89	$1.35	$5,786,562	$4,111,608
VT	256,442	0.7	0.2087	0.7913	0.2	0.6	$8,418	$5,989	$190	$8,228	$0.001	$0.032	$149	$5,840	$0.001	$0.023	$0.03	$0.02	$8,418	$5,989
WA	2,620,076	1.9	0.5203	0.4797	1.0	0.9	$148,813	$106,593	$12,912	$135,901	$0.005	$0.052	$10,134	$96,459	$0.004	$0.037	$0.06	$0.04	$148,813	$106,593
WI	2,279,768	5.3	0.2079	0.7921	1.1	4.2	$549,249	$390,772	$12,349	$536,901	$0.005	$0.236	$9,691	$381,080	$0.004	$0.167	$0.24	$0.17	$549,249	$390,772
WV	763,831	54.0	0.3625	0.6375	19.6	34.4	$1,540,731	$1,099,063	$73,108	$1,467,623	$0.096	$1.921	$57,377	$1,041,686	$0.075	$1.364	$2.02	$1.44	$1,540,731	$1,099,063
WY	226,879	3.4	0.7862	0.2138	2.7	0.7	$12,136	$8,836	$2,957	$9,179	$0.013	$0.040	$2,321	$6,515	$0.010	$0.029	$0.05	$0.04	$12,136	$8,836
Total	**115,994,247**	1890.5			1196.6	693.9	$175,050,218	$124,987,812	$9,874,919								$0.01	$0.005		
Benefits from all IPs, half of GPs		1890.5			1890.5												$6.59	$4.69		

Region	**Households**	**Incremental Increase in Impacts (Acres)** Emergent	Forested	**Annual Benefits** 7%							**3%**
Alaska	-	0.0	0.0	$0							$0
Central Plains	3,293,676	0.0	0.0	$0							$0
Delta and Gulf	15,407,697	-	-	$0							$0
Midwest	-	-	-	$0							$0
Mountain	7,835,482	-	-	$0							$0
Northeast	24,477,954	-	-	$0							$0
Pacific	16,716,512	-	-	$0							$0
Prairie Potholes	2,234,657	-	-	$0							$0
Southeast	21,492,571	-	-	$0							$0
Total				$0							$0

	NWI ESTUARINE MARINE DEEPWATER	NWI ESTUARINE MARINE WETLAND	NWI FRESHWATER EMERG WETLAND	NWI FRESHWATER FORESTSHRUB WET	NWI FRESHWATER POND	NWI OTHER	NWI LAKE	NWI RIVERINE	TOTAL	forested+emergent	Freshwater Emergent	Freshwater forested
AL	127,191.45	32,743.56	109,525.28	2,870,151.89	118,466.10	196.80	462,774.91	58,434.09	3,779,484.09	2,979,677.17	0.0368	0.9632
AK	21,893,487.57	1,937,506.22	21,850,331.84	16,420,206.51	1,113,002.35	34,833.20	4,771,491.38	1,861,458.78	69,882,317.84	38,270,538.34	0.5709	0.4291
AZ	0.00	0.00	14,465.07	65,942.87	11,227.39	1,156.62	115,408.37	78,577.09	286,777.41	80,407.94	0.1799	0.8201
AR	0.00	0.00	25,079.15	748,426.69	28,243.39	353.85	112,854.07	75,664.18	990,621.33	773,505.84	0.0324	0.9676
CA	2,255,932.43	203,764.38	885,867.03	354,187.44	79,834.16	423,863.20	1,553,494.99	284,834.80	6,041,778.42	1,240,054.46	0.7144	0.2856
CO	0.00	0.00	387,249.32	76,437.50	20,014.86	2,602.30	30,702.84	22,975.51	539,982.33	463,686.82	0.8352	0.1648
CT	478,199.85	18,789.01	12,613.21	134,281.18	34,375.44	17.48	37,854.40	14,973.58	731,104.14	146,894.39	0.0859	0.9141
DE	326,650.92	83,705.25	11,804.60	159,575.27	3,792.89	3,713.18	4,230.46	4,683.44	598,156.02	171,379.86	0.0689	0.9311
DC	0.00	0.00	11.74	192.64	32.36	0.57	345.96	4,092.97	4,676.24	204.39	0.0575	0.9425
FL	4,654,846.69	1,456,688.10	3,087,525.80	6,792,869.84	249,006.87	8,419.30	1,148,651.75	146,164.55	17,544,172.91	9,880,395.65	0.3125	0.6875
GA	210,444.76	372,675.10	255,659.35	4,441,710.33	220,025.86	2,003.46	335,672.75	71,233.28	5,909,424.89	4,697,369.69	0.0544	0.9456
HI	1,694,241.94	5,394.11	14,698.08	131,010.94	2,073.27	0.00	3,465.78	6,371.78	1,857,255.91	145,709.02	0.1009	0.8991
ID	0.00	0.00	372,787.37	113,808.69	16,517.25	2,211.15	371,244.68	72,576.40	949,145.54	486,596.06	0.7661	0.2339
IL	0.00	0.00	197,814.21	807,254.67	143,031.52	592.58	716,279.45	108,490.59	1,973,463.01	1,005,068.88	0.1968	0.8032
IN	0.00	0.00	156,754.41	547,435.45	99,074.90	1,007.75	408,274.81	56,655.32	1,269,202.64	704,189.86	0.2226	0.7774
IA	0.00	0.00	337,381.15	364,367.32	111,951.19	264.11	221,190.14	124,827.08	1,159,980.98	701,748.47	0.4808	0.5192
KS	0.00	0.00	58,705.79	33,497.88	59,087.85	1,524.27	83,002.87	45,133.43	280,952.11	92,203.68	0.6367	0.3633
KY	0.00	0.00	26,977.23	292,881.64	113,863.38	2,313.52	380,292.86	81,806.63	898,135.25	319,858.87	0.0843	0.9157
LA	3,921,389.16	1,725,050.22	993,045.42	2,243,841.83	50,380.70	906.57	413,553.75	395,662.82	9,743,830.46	3,236,887.24	0.3068	0.6932
ME	1,424,902.76	152,878.96	200,952.03	1,743,145.52	56,110.61	678.31	939,291.22	96,993.58	4,614,952.99	1,944,097.55	0.1034	0.8966
MD	329,346.18	248,926.18	33,958.30	395,833.76	17,066.28	1,360.62	22,370.82	40,585.05	1,089,447.19	429,792.06	0.0790	0.9210
MA	1,146,352.17	83,121.85	39,681.74	382,303.10	27,667.58	462.74	127,450.93	21,732.40	1,828,772.51	421,984.84	0.0940	0.9060
MI	0.00	0.00	624,318.68	5,794,913.73	153,652.09	21,496.97	6,637,618.40	73,477.66	13,305,477.53	6,419,232.40	0.0973	0.9027
MN	0.00	0.00	2,928,138.43	7,193,418.06	219,297.23	456.99	3,184,385.66	95,490.32	13,621,186.68	10,121,556.48	0.2893	0.7107
MS	105,937.55	59,175.05	87,595.13	1,961,941.68	85,433.10	440.11	144,363.35	58,076.71	2,502,962.67	2,049,536.81	0.0427	0.9573
MO	0.00	0.00	180,859.15	748,430.91	264,093.89	2,920.47	317,187.05	229,760.07	1,743,251.55	929,290.06	0.1946	0.8054
MT	0.00	0.00	522,255.95	87,493.30	70,635.05	7,566.54	597,110.06	267,790.80	1,552,851.71	609,749.26	0.8565	0.1435
NE	0.00	0.00	510,352.11	109,379.83	94,897.61	8,543.51	162,354.01	147,988.79	1,033,515.87	619,731.95	0.8235	0.1765
NV	22.85	0.00	503,170.27	164,489.22	1,888.03	3,958.74	1,299,880.28	6,928.64	1,980,338.01	667,659.49	0.7536	0.2464
NH	50,552.46	10,183.30	39,203.44	213,332.30	26,036.83	42.26	167,329.44	21,060.27	527,740.30	252,535.74	0.1552	0.8448
NJ	874,766.86	212,940.14	67,314.86	623,176.00	25,916.16	3,609.54	51,377.56	29,986.69	1,889,087.81	690,490.86	0.0975	0.9025
NM	0.00	0.00	51,215.82	39,738.21	18,684.35	5,316.87	118,227.93	53,164.92	286,348.10	90,954.03	0.5631	0.4369
NY	1,947,536.85	41,143.60	219,943.89	1,149,432.16	94,086.92	22,405.84	1,214,218.51	151,357.08	4,840,124.84	1,369,376.05	0.1606	0.8394
NC	786,004.63	294,130.65	111,190.97	3,628,891.55	111,776.54	1,182.45	321,338.37	103,281.11	5,357,796.26	3,740,082.52	0.0297	0.9703
ND	0.00	0.00	2,180,889.20	34,555.22	114,822.83	2,207.82	1,177,099.70	71,634.78	3,581,209.56	2,215,444.42	0.9844	0.0156
OH	0.00	0.00	88,258.93	347,038.41	99,819.46	315.67	793,073.21	61,203.78	1,389,709.46	435,297.34	0.2028	0.7972
OK	0.00	0.00	151,120.70	662,097.16	253,612.02	10,843.57	584,596.83	192,738.30	1,855,008.59	813,217.86	0.1858	0.8142
OR	668,462.65	68,740.05	1,038,356.84	266,685.83	59,986.38	4,507.06	610,045.12	215,786.76	2,932,570.69	1,305,042.67	0.7956	0.2044
PA	647.44	55.33	59,022.77	298,702.29	61,734.03	673.00	321,019.39	174,061.55	915,915.79	357,725.06	0.1650	0.8350
RI	261,023.26	8,212.76	3,051.22	54,658.06	4,743.86	0.26	19,490.29	1,079.06	352,258.78	57,709.28	0.0529	0.9471
SC	503,477.29	385,550.94	195,939.06	2,982,784.17	97,010.62	2,180.40	369,776.55	65,444.41	4,602,163.45	3,178,723.23	0.0616	0.9384
SD	0.00	0.00	1,638,700.20	44,860.20	182,639.48	7,385.49	636,819.51	77,292.44	2,587,697.32	1,683,560.41	0.9734	0.0266
TN	0.00	0.00	49,393.15	731,540.61	88,850.19	697.83	485,110.82	128,680.42	1,484,273.02	780,933.76	0.0632	0.9368
TX	1,916,395.66	589,482.60	1,093,581.44	925,928.44	136,909.63	71,075.34	503,579.36	138,732.93	5,375,685.40	2,019,509.88	0.5415	0.4585
UT	0.00	0.00	254,135.81	31,674.16	23,771.29	650.64	1,026,447.70	29,124.68	1,365,804.28	285,809.97	0.8892	0.1108
VT	0.00	0.00	46,692.78	177,068.74	14,047.04	1,202.46	221,527.16	13,562.84	474,101.01	223,761.51	0.2087	0.7913
VA	405,186.05	319,489.63	107,645.06	914,097.46	82,997.48	2,170.30	143,998.17	150,468.68	2,126,052.82	1,021,742.51	0.1054	0.8946
WA	1,848,981.15	236,502.70	336,371.40	310,164.34	48,297.50	4,755.44	596,236.55	125,651.85	3,506,960.93	646,535.73	0.5203	0.4797
WV	0.00	0.00	13,622.84	23,959.48	16,572.06	251.40	19,638.04	92,072.08	166,115.90	37,582.32	0.3625	0.6375
WI	0.00	0.00	613,897.84	2,338,487.40	96,948.89	22,242.22	1,434,676.91	137,982.01	4,644,235.28	2,952,385.24	0.2079	0.7921
WY	0.00	0.00	702,102.84	190,955.69	59,978.49	23,105.33	389,968.38	104,269.29	1,470,380.02	893,058.52	0.7862	0.2138
GU	181,633.98	257.66	1,397.85	2,167.04	29.84	0.00	198.98	3.98	185,689.33	3,564.89	0.3921	0.6079
MP	67,448.48	1,136.97	463.61	162.27	19.78	0.00	43.11	1.44	69,275.67	625.89	0.7407	0.2593
PR	811,864.26	43,960.45	59,723.22	14,010.53	1,193.03	0.00	415.48	652.43	931,819.40	73,733.75	0.8100	0.1900
VI	235,240.80	1,142.16	17.00	109.58	118.81	0.00	137.84	0.00	236,766.19	126.58	0.1343	0.8657
US and Isla	49,128,168.10	8,593,346.92	43,552,830.56	71,185,706.99	5,185,346.71	720,686.11	35,809,188.91	6,692,734.13	220,868,008.42	114,738,537.54	0.3796	0.6204
US Only	47,831,980.58	8,546,849.68	43,491,228.88	71,169,257.56	5,183,985.25	720,686.11	35,808,393.50	6,692,076.28	219,444,457.84	114,660,486.44	0.3793	0.6207

STATE	JA	TOTAL_JDS	DELINEATE	IMPNDMN	ISOLATE	NRPW	NRPWW	RPW	RPWWD	RPWWN	TNWPRW	TNW	TNWW	UPLAND	WATER_TYPE_NULL	TOT WET	TOT ISO	WET NO	STR TOT	STR NO	
AK	N	180	0	0	6	0	0	1	0	1	0	0	0	154	19	215	6	1	334	1	AK
AK	Y	584	0	0	0	0	0	132	70	12	0	201	132	2	34						
AL	N	285	0	2	42	3	2	1	4	0	0	0	1	139	94	113	42	7	362	4	AL
AL	Y	500	0	0	0	11	15	28	43	5	4	315	43	0	33						
AR	N	360	2	1	30	5	0	111	6	13	0	0	0	178	13	80	30	19	213	116	AR
AR	Y	380	3	0	0	14	3	59	26	6	0	24	26	0	220						
AS	Y	5	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	0	4	0	American Samoa
AZ	N	834	0	0	75	709	0	0	0	0	0	0	0	50	0	43	75	0	1070	709	AZ
AZ	Y	408	2	0	0	349	0	8	5	0	0	4	38	0	2						
CA	N	377	8	10	250	3	0	0	2	0	1	0	0	61	51	258	250	2	490	4	CA
CA	Y	865	1	3	0	135	11	239	73	40	1	111	132	9	101						
CO	N	136	9	0	49	1	1	0	0	2	0	0	0	75	7	30	49	3	82	1	CO
CO	Y	130	2	1	0	21	2	48	18	4	0	12	3	1	10						
CT	Y	16	0	0	0	0	0	6	0	1	0	6	2	0	1	3	0	0	12	0	CT
DC	Y	4	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	3	0	DC
DE	N	7	0	0	0	0	0	0	0	0	0	0	0	5	2	24	0	0	19	0	DE
DE	Y	72	0	0	0	0	3	6	12	0	1	12	9	0	29						
FL	N	321	7	20	184	7	1	1	0	7	0	0	1	32	64	370	184	9	734	8	FL
FL	Y	1939	1	0	0	52	57	125	165	46	3	546	93	0	848						
GA	N	103	1	0	24	0	4	0	0	0	0	0	0	38	36	81	24	4	25	0	GA
GA	Y	146	1	2	0	5	2	9	1	29	0	11	45	1	40						
GU	Y	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	Guam
HI	N	20	0	0	0	0	0	0	0	0	0	0	0	19	0	2	0	0	142	0	HI
HI	Y	149	0	0	0	2	0	28	0	1	0	112	1	3	3						
IA	N	63	20	0	14	1	0	0	0	0	0	0	0	17	11	85	14	0	87	1	IA
IA	Y	209	1	0	0	8	4	53	66	4	0	25	11	0	37						
ID	N	64	2	0	4	0	0	2	0	0	0	0	0	49	7	21	4	0	38	2	ID
ID	Y	60	0	0	0	2	1	20	6	1	0	14	13	0	3						
IL	N	466	31	19	349	17	0	10	1	0	0	0	1	37	7	207	349	2	402	27	IL
IL	Y	714	0	0	0	12	19	230	160	4	0	133	22	1	127						
IN	N	273	0	1	110	0	0	2	1	4	0	0	0	42	114	107	110	5	133	2	IN
IN	Y	380	0	0	0	53	20	53	29	51	0	25	2	1	145						
KS	N	229	0	3	69	0	1	2	0	0	0	0	0	143	11	34	69	1	119	2	KS
KS	Y	214	0	5	0	33	2	18	12	15	0	66	4	1	58						
KY	N	271	1	0	30	8	0	4	0	0	0	0	0	221	10	42	30	0	274	12	KY
KY	Y	347	0	4	0	85	2	84	4	19	1	92	17	0	36						
LA	N	2009	0	2	2	0	0	8	9	0	0	0	2	1597	383	678	2	11	1288	8	LA
LA	Y	4278	0	22	0	55	28	412	321	22	0	813	296	32	2283						
MA	N	5	0	1	3	0	1	0	0	0	0	0	0	0	0	4	3	1	7	0	MA
MA	Y	10	0	0	0	0	1	3	1	1	0	4	0	0	0						
MD	N	16	0	0	15	0	0	0	0	0	0	0	0	3	1	90	15	0	247	0	MD
MD	Y	2550	0	1	0	15	10	105	53	10	0	127	17	0	2209						
ME	Y	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	ME
MI	N	5	0	0	0	0	0	0	0	0	0	0	0	4	0	84	0	0	1555	0	MI
MI	Y	1747	1	0	0	0	0	26	2	2	0	1529	80	0	108						
MN	N	166	11	0	65	1	0	0	2	4	0	0	1	23	60	48	65	7	73	1	MN
MN	Y	209	3	0	0	0	0	19	13	4	0	53	24	0	92						
MO	N	193	4	17	6	1	0	1	0	3	0	0	0	142	18	78	6	3	732	2	MO
MO	Y	923	0	1	0	29	20	46	4	18	0	655	33	4	114						
MP	N	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	Mariana Islands
MP	Y	3	0	0	0	0	0	0	0	0	0	2	0	0	1						
MS	N	332	0	0	6	1	0	0	0	0	0	0	0	274	51	42	6	0	155	1	MS
MS	Y	212	0	0	0	1	1	28	6	6	0	125	29	1	15						
MT	N	187	2	1	185	0	0	1	0	0	0	0	0	7	1	133	185	0	90	1	MT
MT	Y	235	0	0	0	1	12	56	104	17	0	32	0	0	3						
NC	N	253	7	1	47	1	0	1	0	0	0	0	0	105	98	1582	47	0	2577	2	NC
NC	Y	5188	8	119	0	28	12	2245	1117	195	3	299	258	10	887						
ND	N	3024	54	3	2947	15	11	2	11	2	3	0	5	14	15	417	2947	29	217	20	ND
ND	Y	679	21	6	0	19	3	73	291	27	84	21	67	0	9						
NE	N	65	0	0	52	1	0	0	0	0	0	0	15	0	0	175	52	15	77	1	NE
NE	Y	244	0	0	0	30	47	28	49	17	4	14	47	2	3						
NH	Y	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	NH
NJ	N	10	0	0	10	0	0	0	0	0	0	0	0	0	0	68	10	0	73	0	NJ
NJ	Y	153	0	0	0	1	0	3	0	0	2	67	68	0	12						
NM	N	35	0	0	1	1	0	0	0	0	0	0	0	28	5	0	1	0	6	1	NM
NM	Y	8	0	0	0	4	0	1	0	0	0	0	0	0	3						
NV	N	420	1	1	368	15	1	3	0	2	0	0	0	26	5	35	368	3	136	18	NV
NV	Y	152	0	0	0	62	5	51	16	10	0	5	1	0	0						
NY	N	345	0	2	298	0	0	7	1	1	0	0	0	29	32	378	298	2	874	7	NY
NY	Y	1486	23	1	0	20	9	443	317	33	0	404	17	0	194						
OH	N	808	57	6	594	35	1	11	3	0	1	0	0	55	81	604	594	4	1168	47	OH
OH	Y	2086	44	22	0	259	60	744	298	188	0	118	54	3	260						
OK	N	20	1	0	4	3	1	3	0	0	0	0	0	8	0	20	4	1	138	6	OK
OK	Y	157	0	3	0	66	8	53	5	4	2	11	2	0	3						
OR	N	56	7	0	38	0	1	0	0	0	0	0	0	5	5	59	38	1	31	0	OR
OR	Y	114	0	0	0	1	14	22	29	9	0	8	6	0	25						
PA	N	238	68	1	118	1	1	2	0	0	0	0	0	43	43	192	118	1	460	3	PA
PA	Y	773	55	0	0	14	5	426	104	50	0	17	32	10	21						
PR	N	6	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	29	0	Puerto Rico
PR	Y	35	2	0	0	0	0	2	0	0	0	27	0	1	3						
RI	Y	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	RI
SC	N	677	7	4	230	7	6	13	33	30	1	0	0	331	110	995	230	69	656	21	SC
SC	Y	2216	69	42	0	45	58	432	524	142	1	157	202	14	435						
SD	N	373	0	0	343	5	1	1	0	0	0	0	0	9	20	104	343	1	71	6	SD
SD	Y	176	0	0	0	25	66	23	28	1	0	17	8	0	2						
TN	N	115	0	2	39	2	0	2	0	0	0	0	0	40	30	27	39	0	967	4	TN
TN	Y	1140	0	0	0	8	1	64	6	18	0	891	2	0	150						
TX	N	958	6	1	486	18	1	2	0	0	0	0	1	380	68	654	486	2	1376	20	TX
TX	Y	2211	2	31	0	52	14	162	99	59	1	1141	480	7	158						
UT	N	91	2	1	72	0	0	0	4	0	0	0	1	12	3	52	72	5	49	0	UT
UT	Y	116	0	0	0	5	3	42	33	9	0	2	2	1	15						
VA	N	264	4	1	154	0	0	0	1	0	0	0	0	92	19	318	154	1	734	0	VA
VA	Y	1286	1	3	0	87	4	391	267	27	0	256	19	1	223						
VI	Y	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	Virgin Islands
VT	N	3	0	0	2	0	1	0	0	0	0	0	0	0	0	1	2	1	2	0	VT
VT	Y	4	0	0	0	0	0	2	0	0	0	0	0	0	2						
WA	N	14	0	0	7	0	1	1	0	0	0	0	0	1	7	67	7	1	1077	1	WA
WA	Y	1181	0	0	0	5	4	237	34	7	0	834	21	0	36						
WI	N	166	54	0	18	0	2	1	1	0	1	0	1	61	28	203	18	4	389	2	WI
WI	Y	738	42	3	0	0	3	222	140	30	26	139	26	18	88						
WV	N	407	4	9	214	34	3	16	0	6	2	0	0	115	9	141	214	9	591	52	WV
WV	Y	805	28	5	0	59	3	405	85	25	9	66	19	1	95						
WY	N	66	4	0	12	2	1	1	0	1	1	0	0	45	0	4	12	2	7	4	WY
WY	Y	6	0	0	0	0	0	3	2	0	0	0	0	0	0						
	N	620	1	1	573	16	0	0	0	0	0	0	0	30	4						
	Y	166	10	0	0	1	2	24	27	10	15	28	21	1	22						
		54359	696	384	8145	2587	576	8151	4744	1255	167	9588	2453	4870	10743				20409		
							9028												20409		

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0000SA0
Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100
Years: 1984 to 2014

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	102.9	104.9
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	106.6	108.5
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	109.1	110.1
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	112.4	114.9
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3	116.8	119.7
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	122.7	125.3
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	128.7	132.6
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	135.2	137.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	139.2	141.4
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	143.7	145.3
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	147.2	149.3
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	151.5	153.2
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9	155.8	157.9
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5	159.9	161.2
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	162.3	163.7
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	165.4	167.8
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	170.8	173.6
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	176.6	177.5
2002	177.1	177.8	178.8	179.8	179.8	179.9	180.1	180.7	181.0	181.3	181.3	180.9	179.9	178.9	180.9
2003	181.7	183.1	184.2	183.8	183.5	183.7	183.9	184.6	185.2	185.0	184.5	184.3	184.0	183.3	184.6
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	187.6	190.2
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	193.2	197.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	200.6	202.6
2007	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208.936	210.177	210.036	207.342	205.709	208.976
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212.425	210.228	215.303	214.429	216.177
2009	211.143	212.193	212.709	213.240	213.856	215.693	215.351	215.834	215.969	216.177	216.330	215.949	214.537	213.139	215.935
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179	218.056	217.535	218.576
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672	224.939	223.598	226.280
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230.221	229.601	229.594	228.850	230.338
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877	234.149	233.546	233.069	233.049	232.957	232.366	233.548
2014	233.916	234.781	236.293	237.072	237.900	238.343	238.250	237.852	238.031	237.433	236.151	234.812	236.736	236.384	237.088

Source: Bureau of Labor Statistics

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